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Westside Salem Timber Management Plan

Proposed Decision

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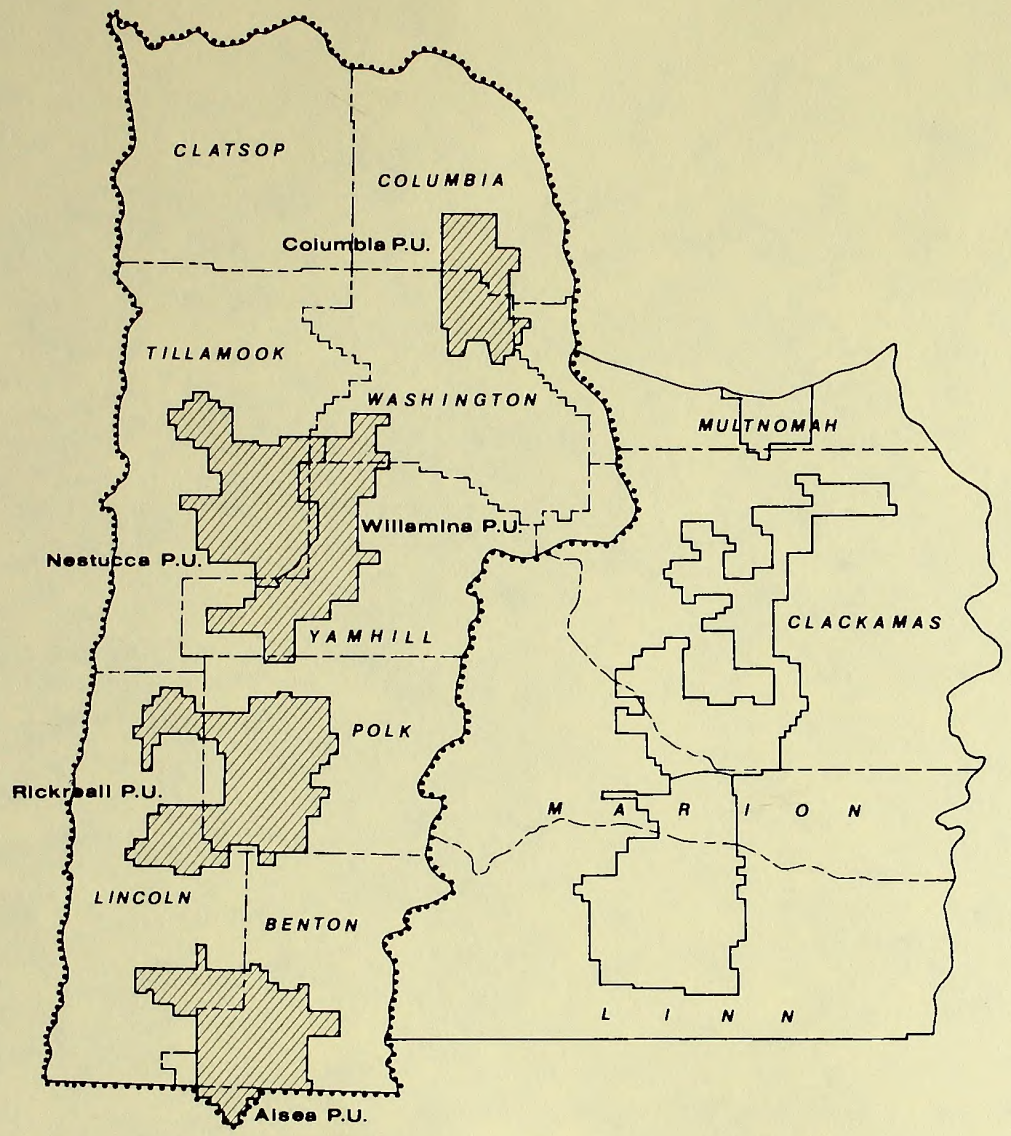

Figure 1
Planning Boundaries
Salem District - Oregon
Bureau of Land Management

Westside Salem Planning Area

Planning Units

County Boundaries

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Salem District Office
1717 Fabry Road S.E.
P.O. Box 3227
Salem, Oregon 97302

May 19, 1983

Enclosed for your review and comment is the proposed decision for a 10-year timber management plan covering BLM-administered commercial forest land in the Westside Salem planning area. I believe this proposal best meets the diverse needs and opportunities identified in the planning area and is consistent with governing policies and criteria. I hope you will study this document in detail. An open house will be held in the Salem District Office at 7:30 p.m., June 8, 1983, to answer your questions regarding the proposed decision. Written comments received by the Salem District Office by July 5, 1983, will be considered in preparing the final decision. The State Director and I will publish the final decision on the timber management plan in the fall of 1983.

District Manager

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Westside Salem Timber Management Plan

Proposed Decision

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Summary of the Proposed Decision

This is a summary of the proposed 10-year timber management plan for the Bureau of Land Management's Salem District Westside Planning Area.

The proposed decision is to adopt a slightly modified version of the proposed action described in the Final Westside Salem Timber Management Environmental Impact Statement.

The central feature of the plan is the annual allowable harvest of 24 million cubic feet (approximately 155 million board feet, MM bd. ft., Scribner 16-foot equivalent) of timber from 183,800 acres of commercial forest land (CFL) in the planning area.

The CFL base includes land which is capable of annually producing at least 20 cubic feet of timber per acre. This plan allocates about 181,200 acres, or 80 percent of the CFL base, to intensive timber management. Practices to be followed on this land include timber harvest, site preparation for reforestation, tree planting, animal damage control, release of tree plantations from competing vegetation, precommercial thinning and fertilization. This land is expected to produce 153.4 MM bd. ft. of timber annually.

An additional 1.8 MM bd. ft. will be harvested annually from about 2,600 acres of CFL identified as Class II Visual Resource Management (VRM) land. In these areas, timber harvest and road construction will not be evident in characteristic landscapes.

Commercial forest land allocated to uses other than planned regular timber management totals 43,900 acres and includes: 15,300 acres (7 percent of CFL) in riparian areas, sensitive watershed protection areas, unique natural areas, and recreation sites; 8,800 acres (4 percent of CFL) designated as severe fragile and reforestation sites which are incapable of supporting sustained yield timber management using current technology; 10,800 acres (5 percent of CFL) of hardwoods uneconomical to harvest; and 9,000 acres (4 percent of CFL) for temporary retention of older forest (mid-age and old-growth forest). This last category represents a response to serious concerns about the possible impacts of eliminating older forest on indigenous plant and animal species and on long-term timber productivity. Harvest cutting in these stands will be temporarily deferred while research is underway to determine needs and impacts.

Existing wildlife habitat will remain essentially undisturbed on more than 43,900 acres of CFL not subject to planned regular timber management. Other wildlife habitat will be available on land managed for full or constrained (VRM II) timber production. This management will maintain viable populations for most native wildlife species on BLM-administered land. Habitat of northern spotted owls will be reduced, but adequate habitat for 10 pairs will be protected.

The plan calls for an eventual timber harvest rotation length of approximately 80 years. However, harvesting of 60-year-old trees would begin in about 60 years and continue for about 90 years.

Full implementation of the proposed decision will cost $5.8 million annually.

The following table compares salient features of this plan, the plan developed for the previous decade (1972 plan) and the final EIS proposed action.

Table 1 Program Comparison

	Alt. 10 No Action (1972 Plan)	Final EIS Proposed Action	Proposed Decision[1]
Acres in Intensive Management	208,300	177,200	181,200
Acres in Constrained Management (VRM II)	0	2,500	2,600
Acres No Planned Timber Management			
Riparian Zones & Watershed Protection	2,400	11,100	12,100
TPCC (Fragile sites, etc.)	900	8,800	8,800
Hardwoods	18,800	9,500	10,800
Natural Areas	0	2,300	3,000
Older Forest Retention Areas [2]	0	13,800	9,000
VRM I	500	800	0
Recreation Management	1,500	1,600	100
Progeny Test Sites	0	100	100
Annual Allowable Harvest Level (MM bd. ft.)	153[3]	149	155
Total Annual Work Years	4,000	3,970	4,180
Total Annual Personal Income (x$1000)	43,000	42,700	44,900
Annual Timber Sale Receipts(x$1000)[4]	48,000	45,900	48,700
Annual Timber Sale Receipts (x$1000)[5]	19,400	18,600	19,700

[1] The principal changes in acreages between the EIS proposed action and the proposed decision are due to:

a. Older forest - old-growth tracts of less than 80 acres no longer retained. Two tracts of intermediate age timber, totalling about 900 acres, added to provide diversity.
b. Two natural areas increased in size based on additional information and analysis.
c. Adjustments to other allocations as a result of a. and b. above.

[2] Specific allocation only; other allocations also include older forest.

[3] Original allowable cut declaration adjusted for loss of Siletz Indian Reservation Lands and overestimate of available commercial thinning volume.

[4] Using fiscal year 1981 average selling price at $314/M bd. ft.

[5] Using fiscal year 1982 average selling price at $109/M bd. ft.

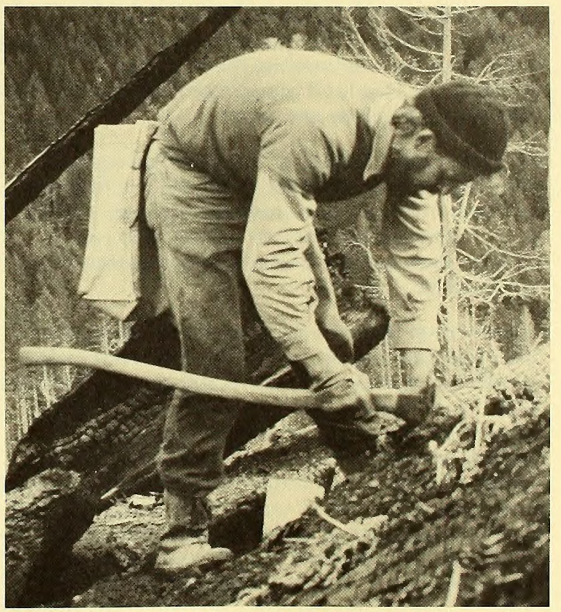
Introduction

Purpose and Scope

The purpose of this document is to present a proposed, 10-year timber management plan for lands administered by the Bureau of Land Management (BLM or Bureau) on the west side of the Salem District. These lands are officially titled the Columbia River and Alsea-Rickreall Sustained Yield Units. Hereafter, they will be referred to as Westside Salem or SYUs.

The plan will be described briefly, along with an assessment of the funding needed for implementation and plans for monitoring and research. More specifically, this document has the following major aims:

- To outline the relationship of O&C lands policy to the decision.
- To show how the decision ties to the land-use planning and environmental analysis processes.
- To identify the significant environmental, economic and social impacts of the decision.



The information provided is summary in nature and limited to those factors and data having a significant bearing on the decision. The management framework plan (MFP), which forms the basis for this timber managagement plan, contains descriptions of extensive and wide ranging operational management measures related to soil stablilzation, water quality maintenance and fish and wildlife habitat protection and enhancement. Because of the detailed nature of these measures and the fact that their application is not dependent on the alternative selected, they will not be discussed in detail in this document. A more in-depth understanding of the plan may be obtained by reviewing the Westside Salem MFP and Draft and Final Timber Management Environmental Impact Statements (EISs), Oregon State Office, BLM, July and December 1981.

Background

The Westside Salem planning area encompasses 244,100 acres of BLM-administered land in the Coast Range of northwest Oregon. These lands, which comprise 7 percent of the planning area, are widely scattered and intermingled with private and other public lands. Of the total BLM-administered acreage, 227,700 acres are classified as commercial forest land (i.e., timber grows or could be grown at a rate of 20 cubic feet or more per acre per year). These lands are also noted for significant wildlife, fisheries, recreation, visual and unique natural values.

In 1972, a land use plan was prepared for the west side of the Salem District. Since that time, increased environmental awareness and basic advancements in resource management have brought the following changes in the planning process:

Timber Inventory.
Two new inventory procedures were established. The Timber Production Capability Classification (TPCC) system was designed to delineate lands suitable and unsuitable for sustained yield production of timber. Unsuitable lands include severe fragile sites and severe problem reforestation sites. They are commonly referred to as TPCC withdrawn and not included in the allowable cut computation. The Operations Inventory was developed to identify in-place silvicultural opportunities and problems, e.g., precommercial thinning and control of competing vegetation. These two inventory efforts were completed in the Salem District in 1976. They refined the data base for the extensive forest inventory which was designed to provide overall growth and yield information for the allowable cut computation. The extensive inventory was completed in 1978.

[1]Most acreage and all tonnage figures in this document are estimated and rounded to the nearest 100. Acreages which are the result of averaging are not rounded.

Multiple-Use Planning.
During the mid-1970s, the Salem District launched an intensive effort in multiple-use planning. Specialists in forestry, lands, minerals, recreation, landscape architecture, archeology, botany, hydrology, soils, wildlife and fisheries were involved in systematic inventory, analysis and plan proposals. In 1980, the District issued a proposed land use plan that served as the framework for the current timber management plan.

Public Participation.
In the mid-1970s, the District began a program to communicate the planning process and proposals.

A variety of public participation activities were scheduled, including:

- tours of BLM-administered lands;
- inventory and analysis workshops;
- plan alternatives workshops;
- advisory council plan reviews and recommendations;
- informal contacts with individuals, interest groups and agencies;
- formal meetings with groups and agencies;
- news releases;
- news letters;
- summaries of plan alternatives and the preferred alternative;
- EIS scoping meeting;
- draft EIS public hearings.

This program will continue to be an integral and on-going part of the planning process.

Environmental Assessment.
In settling a suit brought by the Natural Resources Defense Council (NRDC v. Kleppe, Civil No. 75-1861), BLM agreed to an accelerated schedule of EIS preparation on the series of timber management plans being developed in the 1980s. A draft EIS was prepared and released on July 9, 1981, and a final EIS on December 30, 1981. The alternatives described and analyzed in the EIS are summarized in Appendices A and B.

Policy Development.
Throughout the planning and EIS process, existing policy and legal guidance were questioned by a number of people responding to public review documents. One specific concern was the relative importance of timber management in the context of the Oregon and California Railroad Land Grant Act (O&C Act) and other pertinent legislation. Some respondents alleged that several of the alternatives, including the EIS proposed action, violated the O&C Act by devoting too much attention to uses other than timber production. Other respondents stated that none of the alternatives provided adequate protection for some non-timber resources. To deal with these responses, a policy statement for management of western Oregon BLM-administered lands was drafted and submitted to the Interior Department Solicitor's Office for legal review. The Solicitor examined the proposed policy in light of pertinent legislation and issued a legal analysis essentially indicating that the policy was within the law provided minor revisions were made.

Influencing the subsequent refinement of policy were public concerns and an October 1982 amendment to the Endangered Species Act requiring consideration of State listed species. The O&C Forest Resources Policy (see Appendix C) of March 1983 on which the proposed decision is based is the result of this refinement.

Using the new policy, the alternatives presented in the Westside Salem EIS were evaluated for compliance and possible acceptance as the proposed decision. None of the EIS alternatives, as originally described, were found to be in full compliance, and they were therefore not accepted. Based on an analysis, it was found that the EIS proposed action could be modified to more fully comply with policy. This modification resulted in a new alternative which is the proposed decision.

Proposed Decision

This section of the document provides a description of the proposed decision and a summary of the rationale used to reach this decision. The description is arranged the same as Appendix A to facilitate comparison with EIS alternatives.

Land Use Allocation

The percentages of commercial forest land (CFL) allocated to various uses under the proposed decision are as follows:

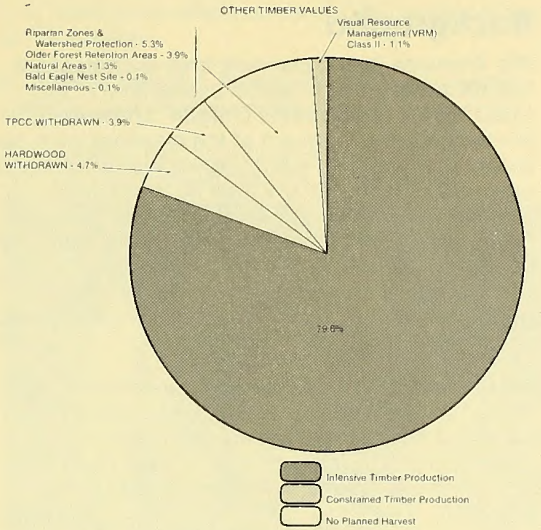


Figure 2.
Proposed Decision Land Allocation

The proposed decision includes commercial forest land allocations of 181,200 acres for intensive timber production; 2,600 acres for constrained timber production (VRM II); 8,800 acres of severe fragile sites and severe problem reforestation sites (hereafter referred to as TPCC withdrawn); 10,800 acres of hardwood withdrawn (i.e., hardwoods which cannot be economically logged due to low quality timber, need for extensive road development, etc., termed "hardwood lands" in EIS); 9,000 acres for temporary retention of older forest; and 15,300 acres for protection and management of other values (see pie chart for specific values).

Timber Management

The total annual allowable harvest level will be 155.2 MM bd. ft. (intensive conifer timber base, 151.0 MM bd. ft.; hardwoods, 2.4 MM bd. ft.; Visual Resource Management Class II - 100-year rotation, 1.8 MM bd. ft.).

Conifer timber available for final harvest will have an average minimum size of 17 inches dbh, which is normally reached in 60 years (see Appendix D for comparison with 50-year minimum harvest age). Harvesting at this size will occur from about the 6th through the 14th decades. Thereafter, harvest will shift to older timber. In the 15th decade, regulation will be achieved with harvest occurring at about 80 years.

A hardwood component is included in the intensive timber production base of the proposed decision. The purpose of this component is to produce a sustained hardwood harvest level. There are 8,200 acres available for harvest, and an annual harvest level of 2.4 MM bd. ft. is anticipated. This harvest level is based only on economically feasible hardwood logging opportunities. The volume on these lands should support harvesting and road development costs without including adjacent conifer lands.

On intensively managed lands, harvest and reforestation practices will be applied during the decade as follows:

Table 2 Harvest and Reforestation Practices

Practice	Approximate Acres/Year
Harvest	
Clearcut	2,290
Commercial Thinning	350
Mortality Salvage	20
Shelterwood	20
Site Preparation	
Broadcast Burning	1,960
Herbicide Application	460
Brush and Hardwood Conversion	100
Planting	
Regular	1,680
Genetic	1,430
Plantation Protection	990
Plantation Release	
Herbicide	2,400
Manual	140
Precommercial Thinning	290
Fertilization	430

Credit for applying these practices is incorporated in the annual allowable harvest level.

The 8,800 acres of TPCC withdrawn lands are judged incapable of supporting sustained yield timber management and are therefore not included in the timber management base. This does not mean that they will never be harvested, but no harvest is planned. Should technology improve to permit harvest and regeneration without significant productivity loss, these lands, or portions thereof, will be returned to the timber management base.

The proposed decision includes no planned harvest of 9,000 acres in the first decade to temporarily protect older forest (in addition to that already withdrawn for other purposes). This withdrawal is proposed in recognition of the expressed concern of many people about the depletion of old-growth timber stands in the Coast Range of northern Oregon. Included in the withdrawal are functioning old-growth systems distributed by seed zone and elevation in order to safeguard long-term timber production. Current research is expected to provide additional knowledge which will aid during the next planning cycle in deciding the importance of retaining these older forest stands. These stands will be harvested only if they cease to be viable older forest ecosystems.

The timber management mitigation measures and design features described in the Westside Salem EIS represent the most reasonable and practicable means to minimize or avoid environmental harm and will be implemented.

Wildlife

Wildlife habitat diversity will be provided through the mix of age classes that will be achieved under normal timber management and through allocations for no planned timber management. Impacts of timber management will be mitigated through efforts to achieve spatial distribution of clearcuts, retain non-hazardous snags, restrict access and, in some cases, seed areas with forage species. Older forest, approximating 25,400 acres at present, 17,900 acres at the end of the first decade, 16,400 acres at the end of the fifth decade and 23,500 acres at the end of the tenth decade, will provide reasonable assurance of maintaining viable populations of old-growth-related species, including 10 pairs of northern spotted owls. A known bald eagle nesting site will be protected by withdrawing 300 acres of commercial forest land and designating the site as an Area of Critical Environmental Concern (ACEC).

Watershed

Soil and water resources will be conserved by meeting or exceeding Oregon Forest Practice rules during intensive timber management and by land allocations for riparian zones and watershed protection (12,100 acres of CFL withdrawn) and TPCC withdrawals (8,800 acres of CFL withdrawn). Riparian zones will be protected on second order streams with fish and third order and larger streams[1]. Road and yarding corridors will be allowed in these zones.

[1]First order streams are the smallest streams shown on BLM planimetric maps. A second order stream is formed where two first order streams flow together. Two second order streams create a third order stream, etc.

Visual Resources

Commercial forest land totalling 2,600 acres will be managed to meet VRM Class II standards, i.e., changes caused by management activities will not be evident in characteristic landscapes. Most of this land is located along or near major travel routes. A timber harvest rotation of approximately 100 years will be used in these areas. The annual allowable harvest level from this portion of the forest will be about 1.8 MM bd. ft., involving an average of 26 acres each year.

Recreation

100 acres of commercial forest land are allocated for nine developed recreation sites, including expansion of one site. The bulk of BLM-administered land will remain available for dispersed recreation use.

Natural Areas

Fifteen areas, totalling 10,500 acres, will be managed to protect unique natural values. Approximately 3,000 acres of CFL will be withdrawn. The areas will be designated Areas of Critical Environmental Concern (ACECs). The intent of this allocation is to provide special areas for recreation, education and scientific study (see Appendix E for a list of these areas).

Decision Rationale

Rationale for the proposed decision is based on five major factors: economics, environment, public opinion, policy, and implementation costs. An analysis of each factor and a summary conclusion are presented below.

Economics

Among the major economic factors influencing the proposed decision are:

- The significance of timber products to local, state and national economies;
- The significance of BLM's timber supply to the economy;
- The need to increase timber production from BLM-administered lands as described in "1980 Oregon Timber Supply Assessment";
- The importance of fishing, hunting and general outdoor recreation to the economy.

With regard to the most significant economic factors, the proposed decision:

- Increases the allowable harvest 1.8 MM bd. ft. over the adjusted 1972 level (see Summary, Program Comparison, footnote 3,).
- Leads to attainment of maximum timber production levels in 15 decades while responding to the need to maintain or increase timber production (see Appendix D);
- Maintains older forest for the purpose of studying its contribution to long-term timber productivity and other resource values;
- Provides for maintaining or increasing outputs from fishing, hunting and outdoor recreation.

At the end of the first decade, the estimated annual economic returns of continuing the No Action Alternative or implementing the proposed decision are as follows:

Table 3 Economic Returns

	Alt. 10 No Action (1972 Plan)	Proposed Decision
General Resource Management		
Outputs		
Timber Sale Volume (MM bd. ft.)	153	155
Angling Days (1,000)	41	113
Hunting Days (1,000)	37	37
Other Recreation Days (1,000)	342	362
Commercial Salmon Fishing (1,000 pounds)	486	860
Employment (Direct & indirect work years)		
Timber	3,699	3,747
Hunting, Angling, Other Recreation	274	362
Commercial Salmon Fishing	55	97
Personal Income (X $1,000)	43,000	44,900
Timber Management		
Timber Sale Receipts (x $1,000)[1]		
FY 81 Level	48,000	48,700
FY 82 Level	19,400	19,700
Payments to Counties (x $1,000)[1]		
FY 81 Level	24,000	24,400
FY 82 Level	9,700	9,900

[1] Based on a sale value of $314/M bd. ft. in fiscal year 81 and $109/M bd. ft. in fiscal year 82.

A table comparing changes anticipated under the proposed decision and the EIS alternatives is in Appendix B.

Environment

Legal guidelines from the Council on Environmental Quality require BLM to identify the environmentally preferable alternative in this planning process. The environmental preferability among alternatives was judged by how well they met the goals established in Title I, Section 101 of the National Environmental Policy Act (NEPA) of 1969, as follows:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.

2. Assure for all Americans safe, healthful, productive and esthetically and culturally pleasing surroundings.

3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.

4. Preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment which supports diversity and variety of individual choice.

5. Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities.

6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

To determine environmental preferability, the proposed decision and EIS alternatives were rated by the Salem District Planning Team using goals in the National Environmental Policy Act (see Appendix F). The proposed decision ranked sixth in environmental preferability. The environmentally preferable alternative is Alternative 5.

The environmental impacts of the proposed decision are compared to those of the EIS proposed action in the following table:

Table 4 Environmental Comparison

Environmental Factor	EIS Proposed Action	Proposed Decision
Habitat Diversity	Provides reasonable assurance of maintaining viable populations of most old-growth-related species by placing 13,800 acres of mostly older forest and 24,600 acres of other forest land in the no planned timber harvest category.	Provides reasonable assurance of maintaining viable populations of most old-growth-related species by placing 9,000 acres of mostly older forest and 24,000 acres of other forest land in the no planned timber harvest category.
Spotted Owls	Provides protection of habitat for 10 known pairs of owls in accordance with the original habitat recommendations of the Oregon Endangered Species Task Force; this exceeds the Task Force target of 7 pairs.	Same
Elk	Elk population expected to decline due to loss of older forest during the first through the fifth decades and then increase as older forest increases beyond the fifth decade. Population decline would be slightly less than the decline occurring under present management. Activities such as transplants and road closures may moderate short-term decline.	Slight reduction in elk populations compared to proposed action.
Primary Excavators and Other Cavity Dwellers	May not maintain viable populations of some species in some areas.	Same
Anadromous Fish Habitat	Maintains improving trend.	Same
Soil Erosion (Past Decade Baseline is 31,000 tons/decade)	28,000 tons per decade.	Slight increase over proposed action.
Sediment Yield (Past Decade Baseline is 6,200 tons/decade)	5,700 tons per decade.	5,900 tons per decade.
Recreation	All existing recreation sites protected; nine potential sites, totalling 250 acres, set aside for future development; three areas, totalling 1,300 acres, to be designated as Recreation Lands.	All existing recreation sites protected; no specific protection for potential sites; no designation of Recreation Lands but most of the acres included in other protective designations.
Visual Resource Management	800 acres to be managed as VRM Class I (withdrawn) and 2,500 acres to be managed as VRM Class II (constrained).	2,600 acres to be managed as VRM Class II.
Natural Areas	2,300 acres withdrawn in 15 sites (See Appendix E).	3,000 acres withdrawn in 15 sites.

Public Opinion

Public opinion received throughout the planning/EIS process provided valuable input to formulation of the proposed decision. This input is summarized in Appendix G.

Many people perceive timber production as being at odds with other resource values. Significantly, however, almost everyone agrees that a reasonable balance should be maintained. The proposed decision attempts to define that balance.

For many, the amount of timber that can be harvested from BLM-administered lands is a bread and butter issue. Their livelihoods are affected, and for that reason they want timber production to be maintained at or near maximum achievable levels. These economic concerns have been emphasized by the Oregon State Department of Forestry, the Association of O&C Counties, timber industry representatives and others.

Generally, people whose livelihoods are less directly affected by the timber industry expressed concern for resource values or uses other than timber production. They have tended to give greater support to habitat diversity, riparian and visual resource protection, recreation and maintenance of water quality. These views are also expressed by some public agencies

The proposed decision recognizes a significant concern for maintaining or increasing the annual allowable harvest level. It also addresses the protection of other resources to the extent provided by law and BLM policy.

Policy

The major policy guidelines for formulating the proposed decision are contained in the O&C Forest Resources Policy of March 1983 (see Appendix C) and the planning coordination/consistency directives outlined in the Federal Land Policy and Management Act (FLPMA). A discussion of the latter is presented in Appendix H. The proposed decision is consistent with both guidelines.

Costs of Implementation

The following table shows the approximate average annual cost of implementing the proposed decision for the first decade. Only timber management and related support programs are shown. The average annual cost to implement the proposed decision is approximately $5,816,000.

Table 5 Funding Level Comparison (x $1,000)

Major Program Area	Full Implementation of Proposed Decision[1]	1983
Timber Sales & Forest Development	4,270	2,845
Administrative Support	824	752
Road System Support[2]	722	644

[1] Estimated 1984 costs.

[2] Includes access acquisition and maintenance; does not include funding for major construction projects or aggregate production.

Certain programs are directly related to growth projections made in determining the proposed harvest level of 155 MM bd. ft. At the fiscal year 1983 funding level, some intensive management programs would not be implemented with the result that timber offerings would be reduced by about 29 MM bd. ft.

Summary Conclusion

Economic considerations played a major role in reaching a proposed decision. Oregon's economy is in need of recovery, and BLM is committed to assisting in the recovery effort. The primary methods of assistance will be to continue emphasizing intensive timber management and to maintain the highest feasible allowable cut consistent with needs of other resources. The demand for wood products is and will continue to be high, so it is important to maintain a continued high output of BLM timber.

Smaller, but still important, economic benefits are derived from non-timber resource uses. These benefits will increase through protection and management of anadromous fisheries and unique recreation features.

Although economic considerations are emphasized and the proposed decision is therefore not the environmentally preferrable alternative, management activities will be conducted in an environmentally sound manner. Oregon Forest Practice rules will be met or exceeded, and restrictions on disturbance of fragile sites and riparian zones will minimize impacts on soil productivity and water quality. Lands are allocated for the specific purpose of protecting unique natural values and endangered species. Mitigation measures will be used to avoid or correct negative impacts on fisheries, wildlife, cultural resources and other non-timber values.

Monitoring and Research

The following table summarizes the major monitoring activities anticipated under the proposed decision. The monitoring plan is designed to help insure compliance with the goals and mitigation measures upon which this decision is based. Information gained from this monitoring will also be used to develop an improved basis from which to build future plans. Much of the monitoring will be accomplished through normal operating procedures such as contract administration and staff field review. This type of monitoring would go on regardless of the alternative chosen. In other instances, special systems have been developed to measure the biological and physical impacts of plan implementation. For example, the "Growth Response from Fertilization and Thinning" is designed to measure actual response in relation to the projected response used in the allowable harvest computation.

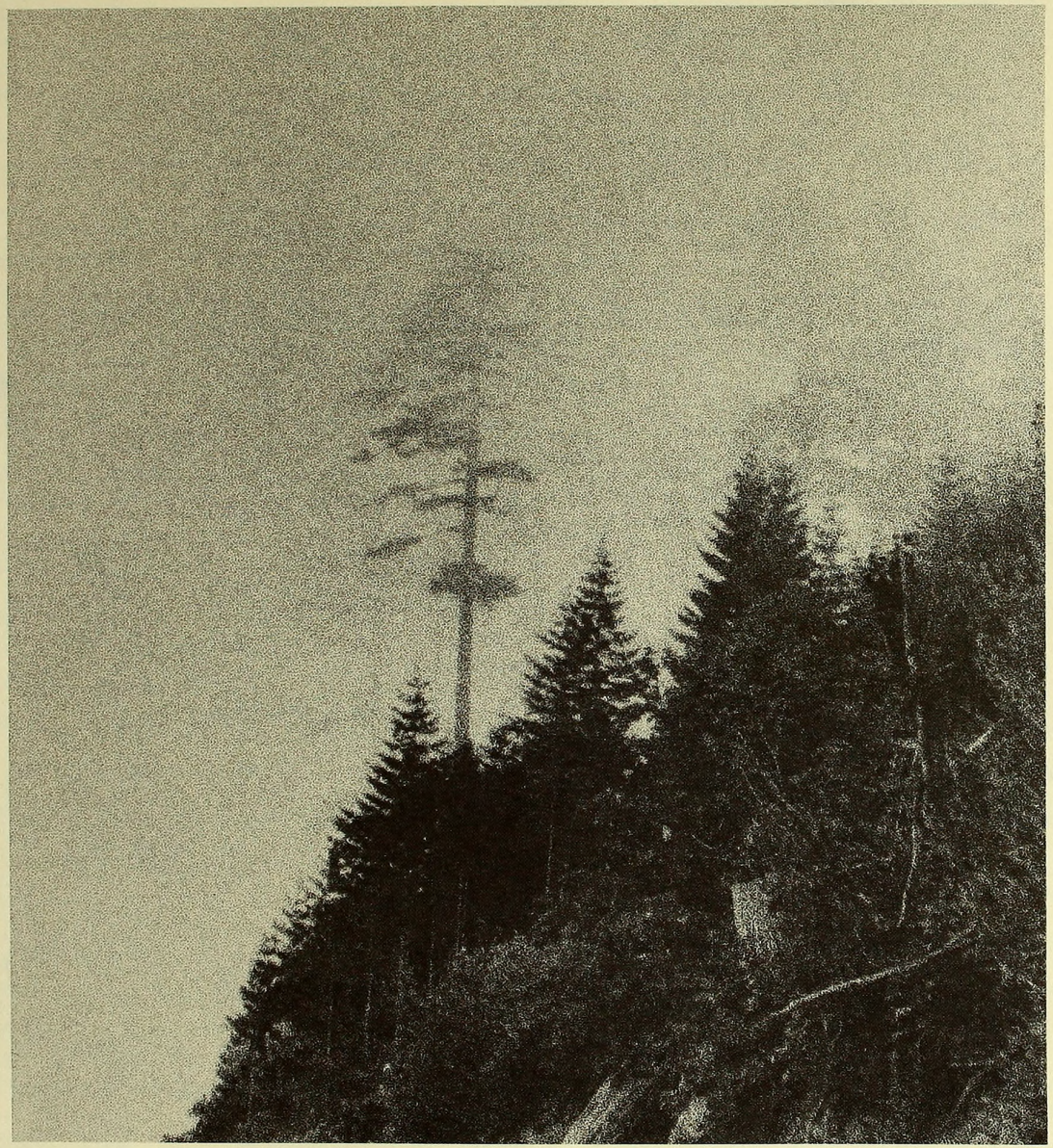
BLM cooperates with the Pacific Northwest Forest and Range Experiment Station and others in a research and development project involving the Douglas-fir old-growth ecosystem. This study is being developed to evaluate the role of older forest in maintaining long-term timber production and to evaluate the relationship of certain species of wildlife to old growth. The overall budget for this 5 year effort is $6.5 million. BLM's planned total contribution is $900,000. In addition, BLM is independently carrying out cooperative research with the Forest Service to determine the importance of down logs in the old-growth ecosystem.

Table 6 District Monitoring Plan

Monitoring Element	Method	Frequency[1]	Characteristics Evaluated[1]
Timber Management			
Tree Planting	Contract administration	Daily during planting season Oct.-April	No. trees/acre; distribution of trees; root forms
Cone Collection	Contract administration	Daily from Aug. 24-Oct 1.	Stand and/or tree selection; location designation; volume obtained; seed count
Chemical Site Preparation	Contract administration	Daily during project	Chemical mix; spray distribution; stream monitoring; unit signing; collecting application data
Release Spray	Contract administration	Daily during project	Chemical mix; spray distribution; stream monitoring; unit signing; collecting application data
Precommercial Thinning	Contract administration	Daily during project	Spacing; tree selection; work quality
Fertilization	Contract administration	Daily during project	Distribution of fertilizer, application monitoring
Seedling Tubing	Contract administration	Daily during project	Number & distribution of tubes; tube and tree positioning
Mountain Beaver Trapping	Contract administration	Weekly during project	Number trapped; unit information
Hand Slashing	Contract administration	Daily during project	Diameter & height limits
Stand Conversion	Contract administration	Daily during project	Diameter & height limits
Timber Sales	Contract administration	Weekly on each contract	Timber cutting & payments; logging system requirements; road construction, use & maintenance; environmental compliance
Periodic Forest Inventory	Permanent plot measurements	Decadal	Ht. growth; dia. growth; stand age; vol. growth/tree; vol. growth/acre
Growth Response from Fertilization and Thinning	Permanent plot measurements	5-10 yr. intervals	Ht. growth; dia. growth; stand age; vol. growth/tree; vol. growth/acre
Release Spray Evaluation	Vegetative survey	Annually and/or 5, 10 & 15 years	Quantify effect of treatment on competition and desired trees; treatment effectiveness

Monitoring Element	Method	Frequency[1]	Characteristics Evaluated[1]
Timber Management			
Reforestation Surveys	Stocking surveys	Annually and/or 5, 10 & 15 years	No. of trees/acre; tree distribution; vegetation competition, survival by seedling type; height growth
Tree Improvement/Progeny Test Sites	Permanent plot measurements	Annually and/or 5, 10 & 15 years	Height growth; comparative height growth per parent
Tree Improvement/Field Plots	Permanent plot measurements	Annually and/or 5, 10 & 15 years	Height growth; comparative height growth per parent
Environmental Assessment Compliance	Inspection of selected sale areas	Periodically throughout the year	Quality of environment after harvest, road construction, herbicide spray, etc.
Watershed Management			
Water Quality	Monitoring of non-point source pollution & analysis of water samples; contract administration	Monthly and/or after major storms	Stream flow profiles; temperature profiles; dissolved oxygen levels; acidity; stream sediment
Wildlife Management			
Stream Habitat	Stream survey	Periodically-every major stream once during 10-yr. period	Channel structure; riparian structure; bedload composition & configuration; fish and aquatic insect populations
Big Game Habitat and Population	Habitat inventory & spotlight counts	Annually	Response to habitat manipulation
Bald Eagle Habitat and Population	Habitat inventory & population surveys	Annually	Reproductive success; response to timber management practices
Spotted Owl Habitat and Population	Habitat inventory & population surveys	Annually	Reproductive success; response to timber management practices
Snag Management	Selective sampling of harvest units	Annually	Quantity & quality of snags left for wildlife
Recreation, Visual & Cultural			
Recreation Use	Random sampling of district-wide recreation use	Periodically-2 or 3 times during the decade	Number of visitors; areas of intensive use
Visual Resource Layout Compliance	Comparison of harvested units with visual simulations	Annually	Effectiveness of visual mitigation measures; compliance with EA stipulations
Cultural Site Protection	Examination of selected sites before and after timber harvest/road construction	Annually	Site integrity; compliance with and effectiveness of protective measures.
ACECs			
Critical Environment Protection	Inspection of designated areas	Annually	Compliance with protective measures; area integrity.

[1] Frequency and characteristics evaluated may vary depending upon severity of environmental impacts, specific contract requirements and administrative priorities.



Appendix A: Description of EIS Alternatives

EIS Proposed Action

Land Use Allocation

This alternative would devote 177,200 acres to the intensive production of timber. Approximately 32,200 acres would be allocated for protection and management of non-timber values. Planned harvest would not occur on 7,500 acres of severe fragile sites and 1,300 acres of severe problem reforestation sites (hereafter referred to as TPCC withdrawn). Additionally, no harvest would be scheduled on 9,500 acres of hardwood withdrawn (uneconomical to log). Specific allocations, expressed as a percentage of commercial forest land (CFL), are displayed below.

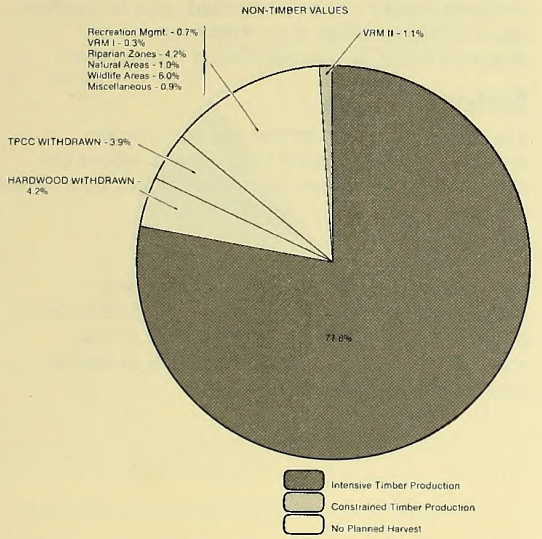


Figure 3. EIS Proposed Action Land Allocations

Timber Management

During the first decade, a total annual allowable harvest level of 149 MM bd. ft. would be achieved, resulting in harvest of approximately 26,300 acres.

Conifer timber available for final harvest on the intensively managed lands would have an average minimum size of 17 inches dbh, which is normally reached in 60 years. Harvest at this size would occur from about the 4th through the 13th decades. The intensively managed forest would reach a regulated state about the 12th decade with an estimated harvest level at that time of 183 MM bd. ft. annually.

Included under this alternative is a trial hardwood management program. The goal of this program is to manage for a sustained hardwood harvest level. The harvest levels calculated for this alternative and all other alternatives, except Alternatives 1 and 10 (Alternative 10 has no trial hardwood program), were based only on economically feasible hardwood logging opportunities. (Economic feasibility is based on proximity of stands to existing roads and quality of timber). The volume present on these lands will support harvesting and road development costs without depending on harvest of adjacent conifer lands. This hardwood base, which contains approximately 9,200 acres, will yield an annual hardwood harvest level of 3 MM bd. ft. (This yield is the same for all other EIS alternatives except Alternatives 1 and 10.)

Wildlife

This alternative would allocate 13,800 acres of CFL (includes old-growth and younger age classes) specifically for wildlife habitat. Harvest would not be scheduled for these acres pending a detailed study of old-growth values during the next decade. Sufficient old-growth habitat should be available to support 10 of 21 known spotted owl pairs at the end of the first decade. Nesting habitat for one pair of bald eagles would be protected.

Riparian habitat encompassing 9,500 acres of CFL would be protected on all second order streams with fish and all third order and larger streams. Wildlife and anadromous fish populations would benefit from the natural diversity in this very important habitat type.

Watershed

Protection of riparian zones (9,500 acres) and watersheds (1,600 acres) under this alternative would adequately protect watershed values. As an indicator of soil and water quality impacts, this alternative, compared to the past decade, would reduce soil erosion by an estimated 2,900 tons per decade and sedimentation by 500 tons per acre over the first decade.

Visual Resources

Under this alternative, allocations of CFL would total 800 acres for VRM I management and 2,500 acres for VRM II management. The scenic qualities of most highly scenic/sensitive public lands would be maintained.

Recreation

An allocation of 1,600 acres of CFL for special recreation management would be made under this alternative. Nine potential recreation sites would be set aside for future construction to complement the District's nine existing recreation sites, and visual buffers around all 18 sites would be provided. Five areas would be managed to provide high value recreation opportunities in natural settings. Three small areas would be designated and managed as Recreation Lands (along the Nestucca, North Fork Alsea and South Fork Alsea Rivers). Other recreation features would not be protected, and recreation opportunities other than those related to dispersed use would be minimal.

Natural Areas

Nine areas, involving 2,300 acres of CFL, would be managed to protect unique natural values. This allocation would fulfill needs for educational and scientific study.

Economics

This alternative would provide, annually, 3,970 work years of employment, $42,711,000 in personal income and $45,886.000 in timber receipts at 1981 prices ($18,550,000 in timber receipts at 1982 prices).

Maximum Timber Production (EIS Alt. 1)

Land Use Allocation

This alternative would devote virtually all commercial forest land (227,200 acres) to the intensive production of timber. Included in this production base would be 8,800 acres of TPCC withdrawn and 23,500 acres of hardwoods. Lands allocated for other resource uses would be limited to one bald eagle nest site and recreation sites totalling 500 acres. Specific allocations are displayed below.

Timber Management

During the first decade, an annual harvest level of 183 MM bd ft. of conifer timber and 7 MM bd. ft. of hardwoods would be achieved, resulting in harvest of approximately 34,400 acres. Conifer timber available for final harvest would have an average minimum size of 15 inches dbh, which is normally reached in 50 years. Harvest at this size would occur from about the 7th through the 18th decades. A fully regulated forest would be achieved about the 28th decade at which time the harvest level would be approximately 215 MM bd. ft. Unlike all the other alternatives, the trial hardwood management program for this alternative assumes all 23,500 acres of hardwood on BLM-administered land would be available for harvest.

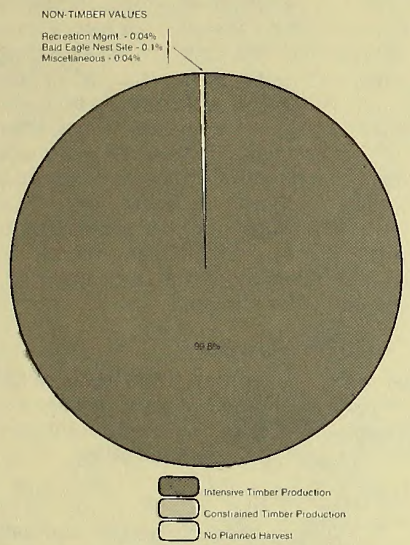


Figure 4. Alternative 1 Land Allocations

Wildlife

This alternative would reduce old-growth forest habitat (196 age class and scattered old growth) from 11,800 acres to about 8,200 acres at the end of the first decade and about 900 acres at the end of the fourth decade. Under this alternative, controls on timber harvest location would not reflect wildlife needs, and solid blocks of old growth would be entered as needed. This fragmentation would be detrimental to wildlife that finds optimum habitat in large, undisturbed blocks of old growth and may foreclose options to establish a habitat diversity program in the future.

Reduction of old-growth habitat from 11,800 acres to 900 acres over 40 years would probably eliminate some wildlife species from BLM-administered land (see DEIS, Appendix D for species list). One of these species would be the northern spotted owl, which the State of Oregon considers threatened.

Stream buffers would be maintained in accordance with Oregon Forest Practice Act (OFPA) rules. Riparian habitat zones would be entered for harvest and management of timber. This would have a significant negative impact on the production of anadromous fish and on wildlife seeking food and cover in these zones. Disturbance would be especially detrimental to populations of wild coho salmon, a species of particular concern to the State of Oregon because its numbers are diminishing.

Watershed

Riparian zone vegetation would be removed and fragile areas would be disturbed by intensive timber management. Under these circumstances, water quality and soil productivity would increase erosion by 20,800 tons per decade and sediment yield by 1,200 tons per acre in the first decade.

Visual Resources

Intensive timber management would be conducted with no consideration for visual values (i.e., no VRM classes and objectives). Scenic quality would be degraded along the Nestucca River and Mary's Peak Road, at BLM developed recreation sites and waterfalls and at other scenic or sensitive areas on public lands.

Recreation

Recreation needs would not be met by the 100 acres allocated under this alternative. Potential recreation sites would not be set aside, and visual buffers around existing recreation sites would not be provided. One special recreation feature, involving no CFL, would be protected. Other features would not be protected, and recreation opportunities, other than those related to dispersed use, would be almost nonexistent.

Natural Areas

This alternative would not protect unique natural values. Existing study areas would be disturbed, and natural areas would not be available for future studies.

Economics

This alternative would provide, annually, 4,900 work years of employment, $53,853,000 in personal income and $59,660,000 in timber receipts at 1981 prices ($24,130,000 in timber receipts at 1982 prices).

Strong Emphasis on Timber Production (EIS Alt. 2)

Land Use Allocation

This alternative would devote 204,800 acres to the intensive production of timber and 600 acres to protection and management of non-timber values. Approximately 8,800 acres of TPCC withdrawn and 13,500 acres of hardwood withdrawn would be excluded from planned harvest. Specific allocations are displayed below.

Timber Management

A total annual harvest level of 176 MM bd. ft. would be achieved, resulting in harvest of approximately 30,200 acres during the first decade. Conifer timber available for final harvest would have an overall minimum size of 17 inches dbh, which is normally reached in 60 years. Harvest at this size would occur from about the 6th through the 19th decades. A major increase in the allowable harvest could occur about the 17th decade, provided the cut remained at the even flow level until that time. At that time the forest would be in a regulated condition. (Note that this condition is reached 11 decades sooner than under Alternative 1, which has a 15-inch dbh minimum harvest size. This relationship holds true for all alternatives, i.e., a decrease in the minimum harvest size increases the immediate allowable harvest level but extends the time to future allowable harvest increases and regulation.)

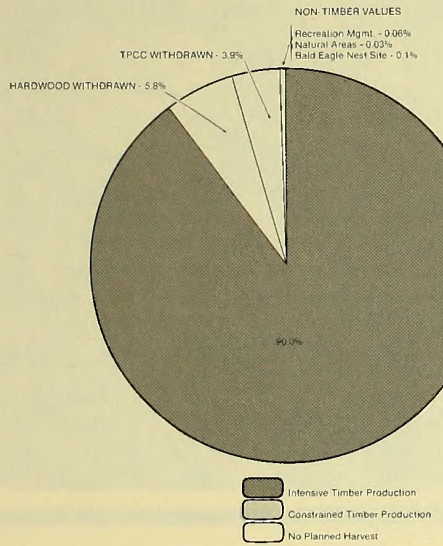


Figure 5. Alternative 2 Land Allocations

Wildlife

This alternative would reduce old-growth forest habitat from 11,800 acres to approximately 8,400 acres at the end of the first decade and 1,100 acres at the end of the fourth decade. By the fifth decade, viable populations of wildlife that find their optimum habitat in old growth would in all likelihood disappear from BLM-administered land.

Riparian zones would not be protected. Impacts on wildlife and anadromous fish production would be highly detrimental.

Watershed

The protection of fragile sites under this alternative would contribute to good upland watershed conditions. Unprotected riparian zones would have negative impacts on water quality. As an indicator of soil and water quality impacts, this alternative would reduce erosion by 2,000 tons per decade and increase sediment yield by 300 tons per acre over the first decade.

Visual Resources

Intensive timber management would be conducted with no regard for visual values. The scenic quality of public lands would be degraded.

Recreation

This alternative is the same as Alternative 1 except that one additional feature, involving 40 acres of CFL, would be protected and managed.

Natural Areas

Under this alternative, one area, involving 60 acres of CFL, would be managed to protect unique natural values. Undisturbed areas for educational and scientific study would, for the most part, be unavailable.

Economics

This alternative would provide, annually, 4,560 work years of employment, $49,236,000 in personal income and $55,264,000 in timber receipts at 1981 prices ($22,352,000 in timber receipts at 1982 prices).

Emphasis on Timber Production (EIS Alt. 3)

Land Use Allocation

This alternative would devote 190,600 acres to the intensive production of timber and 17,000 acres to protection and management of non-timber values. Approximately 8,800 acres of TPCC withdrawn and 11,300 acres of hardwood withdrawn would be excluded from planned harvest. Specific allocations are displayed below.

Timber Management

An annual harvest level of 163 MM bd. ft. would be achieved, resulting in harvest of approximately 28,200 acres during the first decade. Conifer timber available for final harvest would have an average minimum size of 17 inches dbh, which is normally reached in 60 years. Harvest at this size would occur from the 6th through the 14th decades. Regulation would occur about the 13th decade.

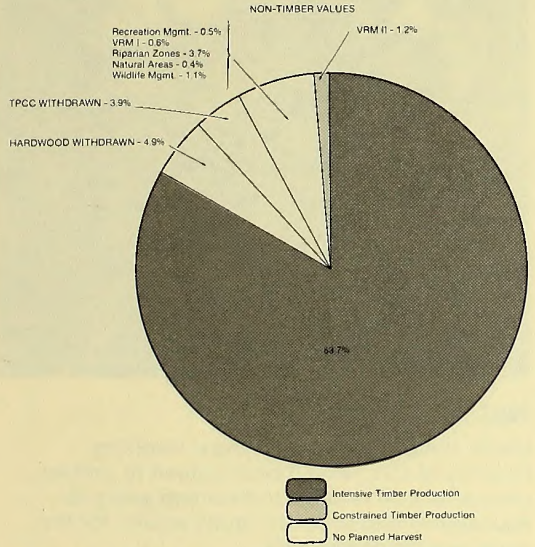


Figure 6. Alternative 3 Land Allocations

Wildlife

This alternative should provide optimum habitat for five known pairs of northern spotted owls at the end of the first decade. Essentially, this is a single species alternative, i.e., it is aimed specifically at the northern spotted owl. While some other species may benefit from the maintenance of old growth for owls, this alternative may not adequately support viable populations of most species using old growth as optimum habitat. Generally speaking, the spotted owl areas would be too far apart to maintain genetic flow for species with limited mobility. Implementation of this alternative would probably preclude the adoption of a habitat diversity program in the future.

Preservation of riparian habitat on all second order streams with fish and all third order and larger streams would benefit anadromous fish production and many species of terrestrial wildlife.

Watershed

This alternative would provide basic protection for watershed values. As an indicator of soil and water quality impacts, this alternative would reduce erosion by 2,600 tons per decade and sedimentation by 130 tons per acre over the first decade.

Visual Resources

Under this alternative, allocation of CFL would total 1,400 acres for VRM I management and 2,600 acres for VRM II management. The scenic qualities of most highly scenic/sensitive public lands would be maintained.

Recreation

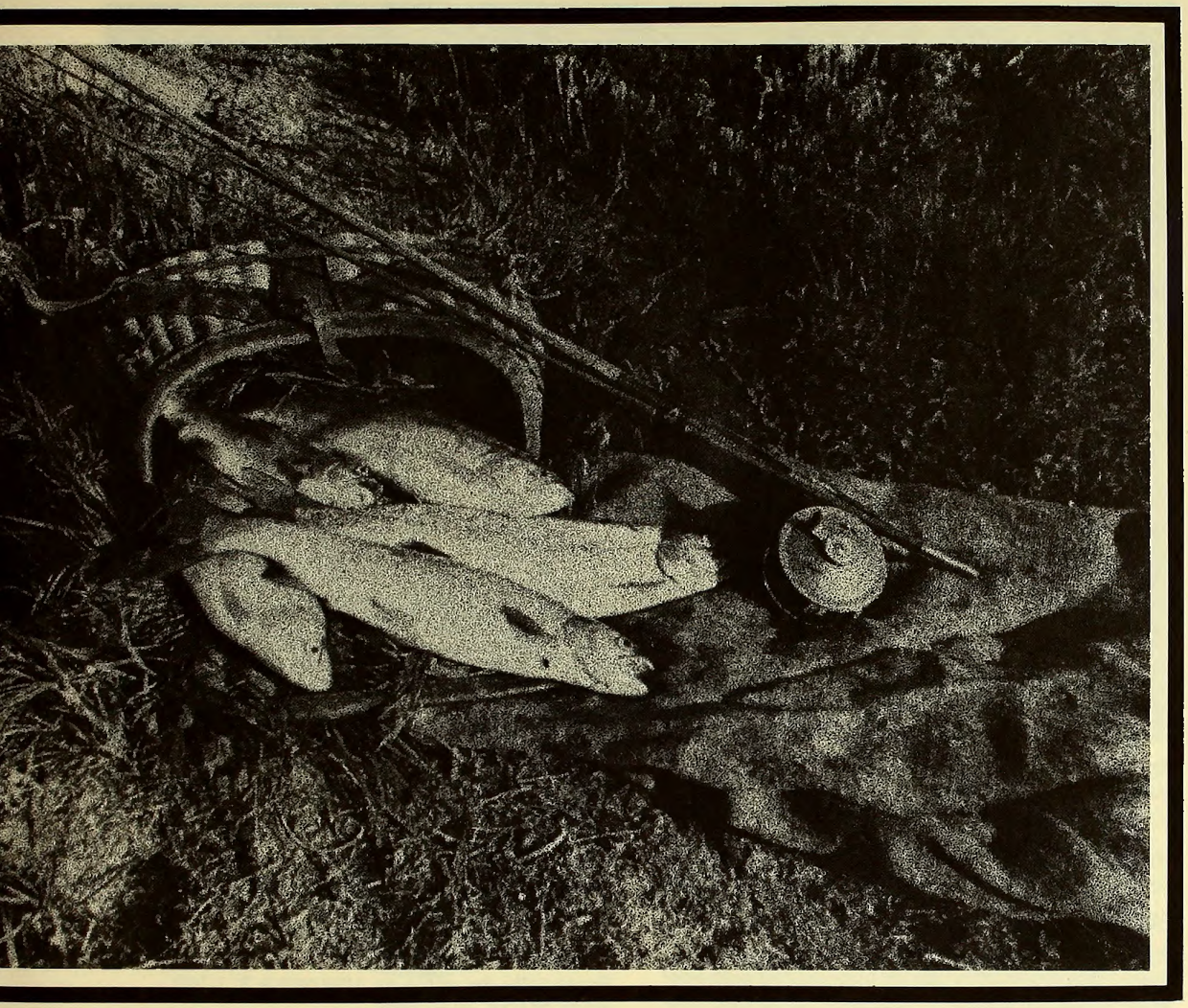
This alternative is essentially the same as the EIS proposed action. The CFL allocation to special recreation management is reduced to 1,200 acres.

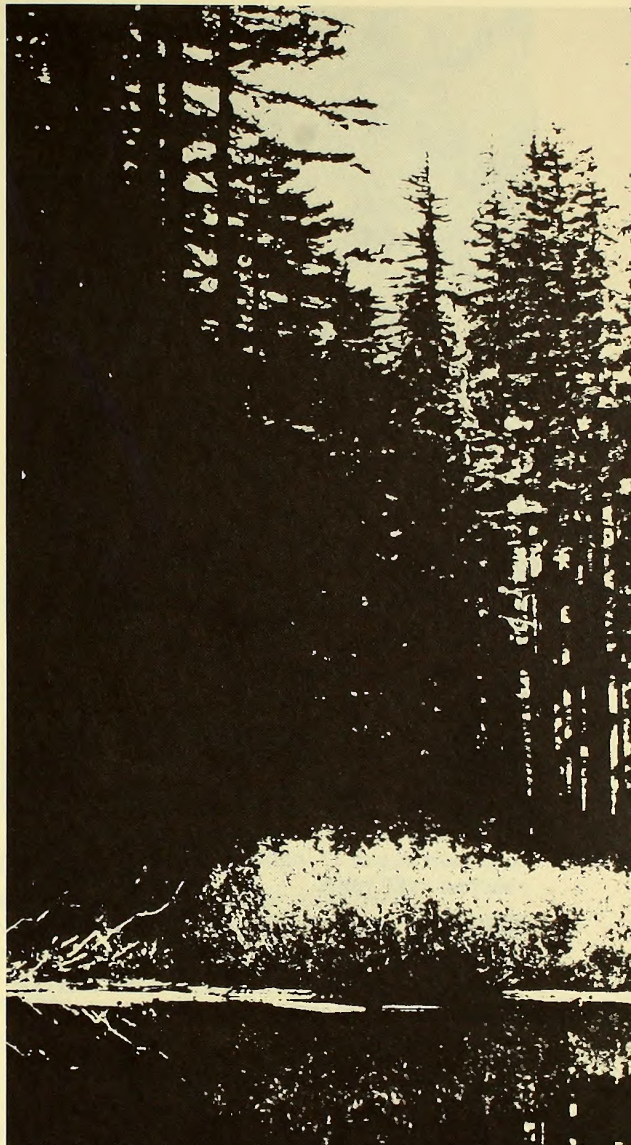
Natural Areas

Under this alternative, eight Areas, involving 1,000 acres of CFL, would be managed to protect unique natural values. Some of these areas might be adversely affected due to inadequate buffering from adjacent management activities.

Economics

This alternative would provide, annually, 4,370 work years employment, $46,712,000 in personal income and $51,182,000 in timber receipts at 1981 prices ($20,701,000 in timber receipts at 1982 prices).





Emphasis on Non-Timber Values (EIS Alt. 4)

Land Use Allocation

This alternative would devote 164,800 acres to the intensive production of timber. Approximately 42,500 acres would be allocated for protection and management of non-timber values. Planned harvest would not occur on 8,800 acres of TPCC withdrawn and 11,600 acres of hardwood withdrawn. Specific allocations are displayed below.

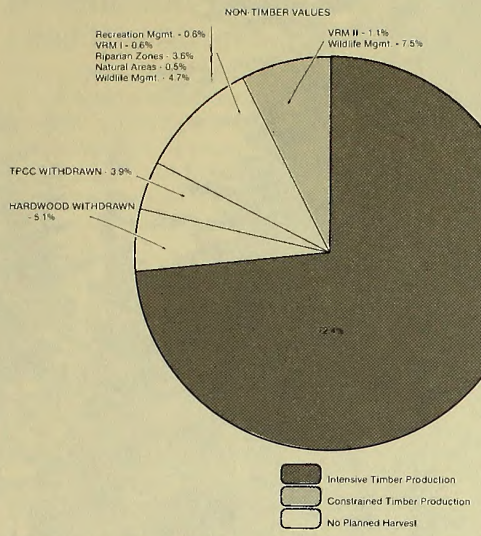


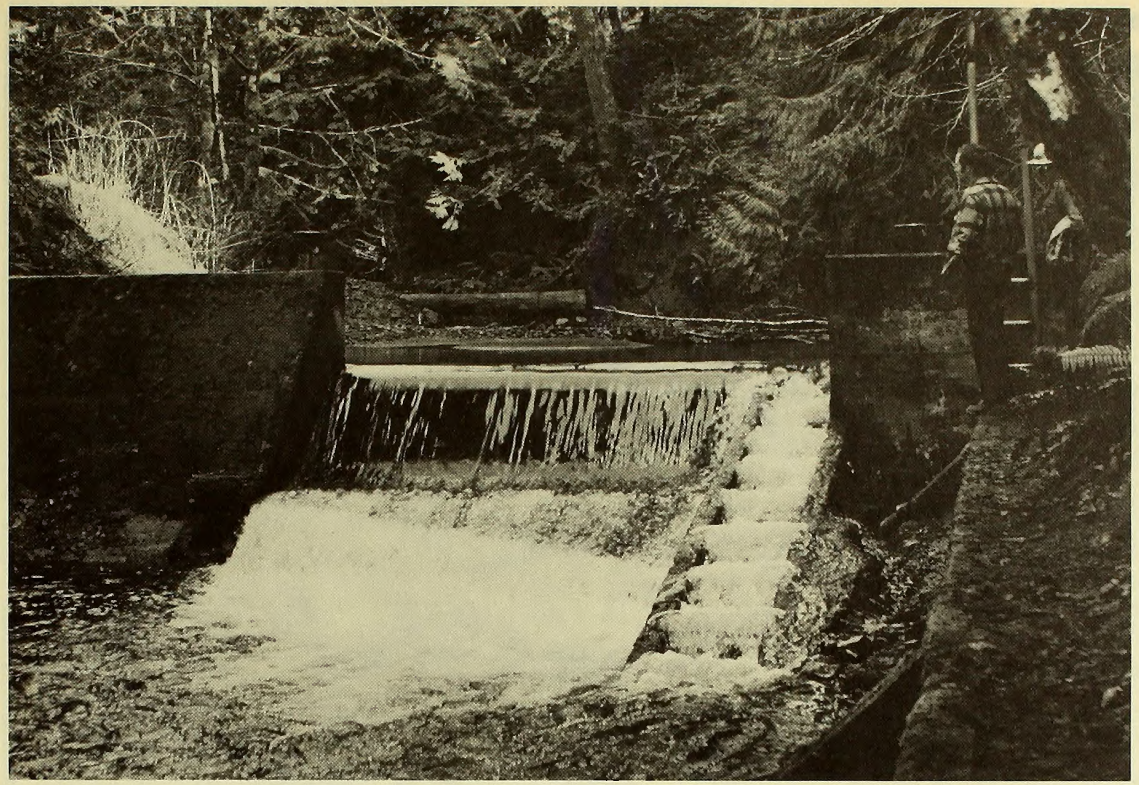
Figure 7. Alternative 4 Land Allocations

Timber Management

An annual harvest level of 141 MM bd. ft. would be achieved, resulting in harvest of approximately 24,300 acres during the first decade. Conifer timber available for final harvest on the intensive base would have an average minimum size of 17 inches dbh, which is normally reached in 60 years.

Wildlife

Approximately 27,700 acres of CFL would be managed on an extended rotation (350-year) to provide the old-growth component of wildlife habitat. The habitat would be allocated in large (1,920-acre) and small (240-acre) blocks of old-growth and replacement habitat. The small blocks would form "stepping stones" between the large blocks, forming a discontinuous corridor on BLM-administered land. With this pattern, optimum habitat for six known pairs of spotted owls could be maintained.



Riparian habitat management and benefits would be the same as under the EIS proposed action.

Watershed

Basic watershed protection would be provided under this alternative. As an indicator of soil and water quality impacts, this alternative would reduce erosion by 5,000 tons per decade and sediment by 1,000 tons per acre over the first decade.

Visual Resources

Under this alternative, visual resources would be protected by a CFL allocation of 1,400 acres for VRM I management and 2,600 acres for VRM II management. The scenic qualities of most highly scenic/sensitive public lands would be maintained.

Recreation

Essentially the same as Alternative 3; 1,400 acres of CFL allocated.

Natural Areas

Essentially the same as Alternative 3; 1,100 acres of CFL allocated.

Economics

This alternative would provide, annually, 3,850 work years of employment, $40,954,000 in personal income and $44,274,000 in timber receipts at 1981 prices ($17,907,000 in timber receipts at 1982 prices).

Strong Emphasis on Wildlife and Other Non-Timber Values (EIS Alt. 5)

Land Use Allocation

This alternative would devote 141,100 acres to the intensive production of timber. Approximately 69,600 acres would be allocated for protection and management of non-timber values. Harvest would not be scheduled for 8,800 acres of TPCC withdrawn and 8,200 acres of hardwood withdrawn. Specific allocations are displayed below.

Timber Management

An annual harvest level of 99 MM bd. ft. would be achieved, resulting in harvest of approximately 17,000 acres during the first decade. Conifer timber available for final harvest on the intensive base would have an average minimum size of 19 inches dbh, which is normally reached in 70 years.

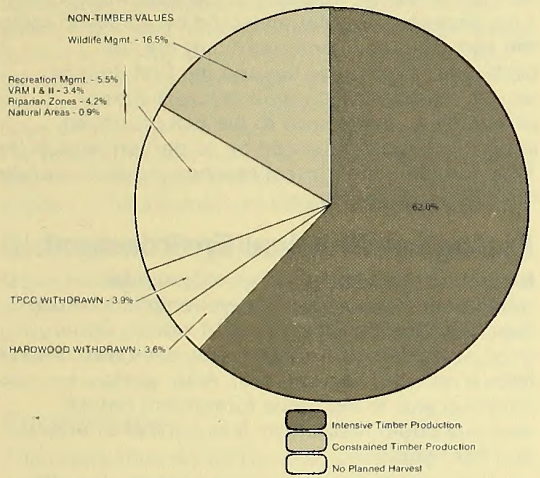


Figure 8. Alternative 5 Land Allocations

Wildlife

Approximately 37,600 acres of CFL would be managed on extended rotation (200- and 350-year) to provide the mature and old-growth components of habitat diversity. Unlike the corridor approach described in Alternative 4, this alternative would provide a distribution of mature and old-growth forest habitat blocks throughout the SYUs. Given this distribution, optimum habitat for 10 known pairs of spotted owls could be maintained.

Riparian habitat would be protected on about 9,600 acres of CFL, which covers all second order and larger streams. Fish and wildlife benefits would be slightly higher than those under the EIS proposed action.

Watershed

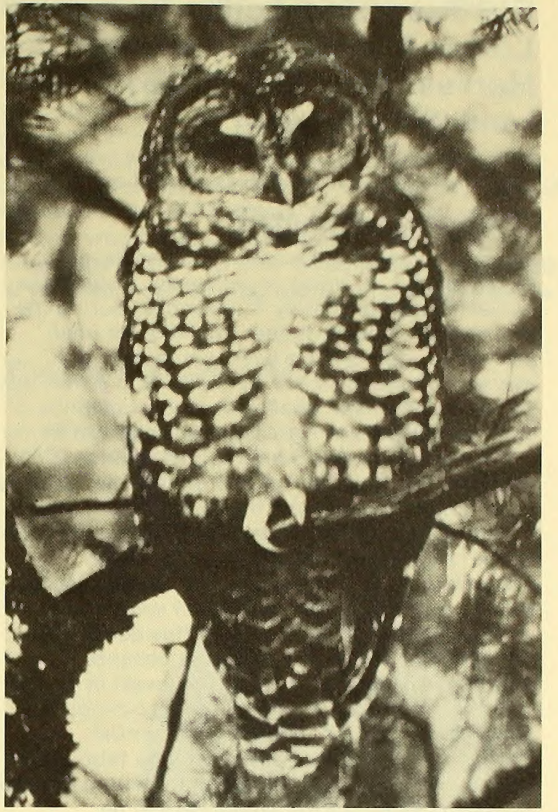
Under this alternative, protection of fragile sites, riparian zones and other sensitive watershed areas would be optimized. Erosion would be reduced by 7,800 tons per decade and sediment by 2,300 tons per acre over the first decade.

Visual Resources

This alternative would provide for visual resources by allocating 7,700 acres of CFL for VRM I and II management. The scenic quality of public lands would be maintained.

Recreation

Recreation needs would be fully met by allocating 12,600 acres of CFL for special recreation management under this alternative. Eight potential recreation sites would be set aside for construction, and visual buffers around 17 sites would be protected. Three large areas would be designated and managed as Recreation Lands (along the Nestucca, North Fork Alsea and South Fork Alsea Rivers). Five sites would be managed to protect high value recreation opportunities in a natural setting. Special recreation features would be protected at most important sightseeing areas, and opportunities related to public use of special and extensive recreation management areas would be optimal.



Natural Areas

Nine areas, involving 2,100 acres of CFL, would be managed to protect unique natural values. This alternative would most completely meet a need for educational and scientific study areas.

Economics

This alternative would provide, annually, 2,900 work years of employment, $30,153,000 in personal income and $31,086,000 in timber receipts at 1981 prices ($12,573,000 in timber receipts at 1982 prices).

EIS Proposed Action with Lower Average Minimum Harvest Size (EIS Alt. 6)

Land Use Allocation

Land use allocations of this alternative are identical to those of the EIS proposed action.

Timber Management

Under Alternative 6, an annual harvest level of 155 MM bd. ft. would be achieved, resulting in harvest of approximately 27,000 acres during the first decade. Conifer timber available for final harvest on the intensive base would have an average minimum size of 15 inches dbh rather than 17 inches dbh. This smaller size is normally reached in 50 years. Harvest at this size would occur from about the 6th through the 19th decades. The net effect of this difference would be to lengthen the time until the forest reaches its maximum productive state (regulated forest) from about 12 decades to 23 decades. The total production of wood over the next 23 decades would be approximately 8 percent lower than under the EIS proposed action. This decline in production would occur primarily because Alternative 6 would concentrate harvest in young stands that are below their optimum biological growth level (culmination of mean annual increment) for a longer period of time (about 13 decades). Essentially, the higher minimum harvest size in the EIS proposed action would be biologically more efficient in bringing the forest to regulation. However, this efficiency would result in a lower allowable harvest level now.

Biological-Physical Environment

Major biological/physical environmental relationships would be nearly identical to those described for the EIS proposed action. There would be some minor adverse impacts on non-timber resources as a result of the increased final harvest level.

Economics

This alternative would provide, annually, 4,190 work years of employment, $44,664,000 in personal income and $48,670,000 in timber receipts at 1981 prices ($19,685,000 in timber receipts at 1982 prices).

EIS Proposed Action with Higher Minimum Harvest Size (EIS Alt. 7)

Land Use Allocation

Land use allocations of this alternative are identical to those of the EIS proposed action.

Timber Management

During the first decade, an annual harvest level of 140 MM bd. ft. would be achieved, resulting in harvest of about 24,900 acres. The difference between Alternative 7 and the EIS proposed action is that conifer timber available for final harvest on the intensively managed lands would have an average minimum size of 19 inches dbh, which is normally reached in 70 years. Harvest at this size would occur from about the 4th through the 11th decades. The intensively managed forest would reach a regulated state about the 10th decade with an estimated harvest level at that time of about 187 MM bd. ft. annually.

Biological-Physical Environment

Major biological/physical environmental relationships would be nearly identical to those described for the EIS proposed action. There would be some improvement in non-timber resources, created by a reduced harvest level.

Economics

This alternative would provide, annually, 3,830 work years of employment, $40,716,000 in personal income and $43,960,000 in timber receipts at 1981 prices ($17,780,000 in timber receipts at 1982 prices).

No Control of Competing Vegetation with Herbicides (EIS Alt. 8)

Land Use Allocation

Land use allocations of this alternative are identical to those of the EIS proposed action.

Timber Management

An annual harvest level of 146 MM bd. ft. would be achieved, resulting in harvest of approximately 25,900 acres during the first decade. Minimum harvest size would be the same as under the EIS proposed action. The difference in Alternative 8 is that herbicides would not be used to control grass, brush and hardwood species growing in competition with commercial conifers. Biological, mechanical or manual control of vegetation for timber management would be prescribed at approximately the same investment cost as use of herbicides in the EIS proposed action to provide a means of direct comparison between the two alternatives. Harvest at 17 inches dbh would occur from about the 6th through the 17th decades. Regulation would be achieved about the 16th decade. Continuation of the "no herbicide" alternative beyond the first decade would result in a reduction in future timber productivity. Compared to the EIS proposed action, productivity would be 10 percent less in the 12th decade (when forest reaches regulation under the EIS proposed action).

Biological-Physical Environment

Major biological/physical environmental relationships would be nearly identical to those described for the EIS proposed action. Some improvement in non-timber resources would result from a reduced harvest level. Also, some improvement in big game forage and habitat diversity could result from less control of brush and hardwoods.

Economics

This alternative would provide, annually, 3,980 work years of employment, $42,367,000 in personal income and $45,844,000 in timber receipts at 1981 prices ($18,542,000 in timber receipts at 1982 prices).

No Allowable Cut Effect (EIS Alt. 9)

Land Use Allocation

Land use allocations of this alternative are identical to those of the EIS proposed action.

Timber Management

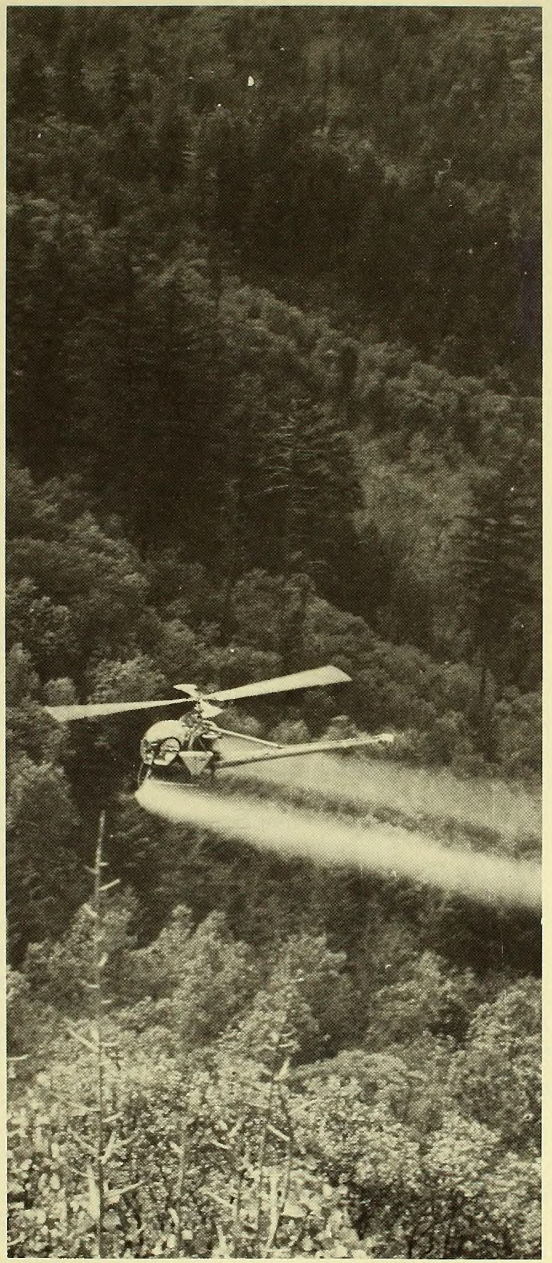
An annual harvest level of 114 MM bd. ft. would be achieved, resulting in harvest of approximately 21,100 acres during the first decade. Credit for expected increased yields from intensive timber management practices (genetically improved stock, fertilization, precommercial and commercial thinnings) would not be taken until gains are realized in future inventories. Bureau policy is to take credit in allowable-cut planning for the present and future effects of practices that are environmentally, technically and economically feasible (BLM Manual 5240). Such credit is taken by harvesting timber that is excess to the amount necessary to maintain an even flow at the non-intensive management level. This procedure has been termed the "allowable cut effect" (ACE). In the SYUs, there was only sufficient harvest age timber to take credit for about 41 percent of projected future yields. Conifer timber available for final harvest on the intensively managed lands would have an average minimum size of 21 inches dbh. Harvest at this size would occur during the fifth and sixth decades. The allowable cut effect was applied in all alternatives except Alternative 9.

Biological-Physical Environment

Major biological/physical characteristics would be similar to those described for the EIS proposed action. Some improvement in non-timber resources would result from the reduced harvest level.

Economics

This alternative would provide, annually, 3,240 work years of employment, $33,871,000 in personal income and $35,796,000 in timber receipts at 1981 prices ($14,478,000 in timber receipts at 1982 prices).



No Action - No Change (EIS Alt. 10)

Land Use Allocation

This alternative is basically a continuation of the 1972 timber management plan. The intensive timber production base would be 208,300 acres. Approximately 4,400[1] acres would be allocated for protection and management of non-timber values. Harvest would also be restricted on 900[1] acres of fragile site withdrawn and 18,800 acres of hardwood withdrawn. Specific allocations are displayed below.

Timber Management

An annual harvest level of 153 MM bd. ft. would be achieved, resulting in harvest of about 22,600 acres during the first decade. Conifer

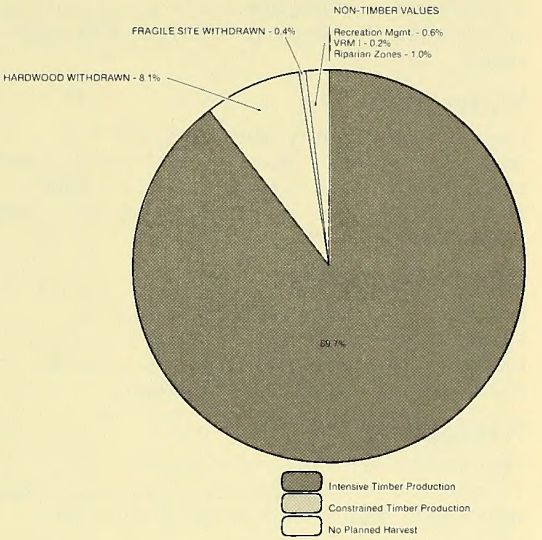


Figure 9. Alternative 10 Land Allocations

[1] This is a corrected figure; Table A-2 of the Westside Salem EIS is in error.

timber available for final harvest would have an average minimum size of about 19 inches dbh, which is normally reached in 70 years. The forest would reach a regulated state in about the 14th decade. About 4,000 acres of the intensive timber base, identified under TPCC as incapable of sustained yield management, would be available for harvest. The TPCC inventory was conducted after the 1972 plan.

Wildlife

This alternative would eliminate all old-growth forest habitat by the end of the first decade. Viable populations of species which find their optimum habitat in this type would probably disappear from BLM land (see draft EIS, Appendix D for Species List). Riparian zone protection limited to 500 acres would not adequately protect wildlife, and the potential for increased production of anadromous fish would be limited. Implementation of this alternative would preclude the adoption of a habitat diversity program after 10 years.

Watershed

Limited riparian zone protection could result in unfavorable impacts if best management practices are not successful. Harvest on 4,000 acres of fragile areas would be detrimental to basic soil and water values.

Visual Resources

Under this alternative, 500 acres would be allocated for management of visual resources. Except for a few areas, the scenic qualities of public lands would not be maintained.

Recreation

This alternative is the same as Alternative 1 except that potential developed recreation sites would be withdrawn from timber production.

Natural Areas

Same as Alternative 1.

Economics

This alternative would provide, annually, 4,000 work years of employment, $42,998,000 in personal income and $48,042,000 in timber receipts at 1981 prices ($19,431,000 in timber receipts at 1982 prices).

Summary Rationale for Elimination of Alternatives from Further Consideration

Emphasis on Non-Timber Values (EIS Alt. 4)
Strong Emphasis on Non-Timber Values (EIS Alt. 5)
Higher Minimum Harvest Size (EIS Alt. 7)

- Include allocations for visual resource management (VRM I), Recreation Lands and recreation sites; such allocations inconsistent with policy;
- Do not adequately respond to current socio-economic needs of timber-dependent communities.

Maximum Timber (EIS Alt. 1)

- Does not maintain long-term options for management of older forest;
- Makes little provision for protection of important non-timber values;
- Harvest of most currently identified TPCC withdrawals runs counter to sustained yield goal.

Strong Emphasis on Timber (EIS Alt. 2)

- Does not maintain long-term options for management of older forest;
- Makes little provision for protection of important non-timber values.

Emphasis on Timber (EIS Alt. 3)
Lower Minimum Harvest Size (EIS Alt. 6)

- Include VRM and Recreation Lands/sites allocations which are inconsistent with policy.

No Herbicides (EIS Alt. 8)

- Includes VRM and Recreation Lands/sites allocations which are inconsistent with policy.
- Does not adequately respond to current socio-economic needs.
- Eliminates use of a viable intensive management practice.

No ACE (EIS Alt. 9)

- Includes VRM and Recreation Lands/sites allocations which are inconsistent with policy.
- Does not adequately respond to current socio-economic needs.
- Inconsistent with allowable cut policy.

No Action (EIS Alt. 10)

- Includes VRM and recreation sites allocations which are inconsistent with policy.
- Harvest of some currently identified TPCC withdrawals runs counter to sustained yield goal.
- Does not adequately protect important non-timber values.

Appendix B: Table 7 Short Term Potential Economic Impacts of Alternative Actions; Comparison of Alternatives Against "No Action" [1] Alternative; Annual Rate During the First Decade

	Alt. 10 No Action	Proposed Action PA	Proposed Decision	Alt. 1 Max. Tbr.	Alt. 2 Str. Tbr.	Alt. 3 Emp. Tbr.	Alt. 4 Emp. Other	Alt. 5 Full Econ.	Alt. 6 Lo MHS	Alt. 7 Hi MHS	Alt. 8 No Herb.	Alt. 9 No ACE
Volume of Timber Sales [2] - Total million bd. ft	153	-4	+2	+37	+23	+10	-12	-54	+2	-13	-7	-39
Recreation Visitor Days -												
Angling Days (1,000)	41	+72	+72	0	0	+72	+72	+94	+72	+72	+72	+72
Hunting Days (1,000)	37	+1.2	0	0	0	+0.4	0	+2.8	+1.2	+1.2	+1.2	+1.2
Other Recreation Days (1,000)	342	+40	+20	0	0	+20	+40	+52	+40	+40	+40	+40
Commercial Salmon Fishing (1,000 lbs.)	486	+374	+374	0	+37	+374	+374	+449	+374	+374	+374	+374
Total Employment-Work Years [3]	4,000	-30	+180	+900	+560	+370	-150	-1,100	+190	-170	-20	-760
Timber Industry Employment (Direct)	1,145	-52	+15	+277	+172	+75	-89	-403	+15	-97	-49	-290
Timber Related Employment (Indirect)	2,554	-115	+33	+618	+384	+167	-200	-899	+34	-216	-111	-644
Recreation Employment (Direct and Indirect)	274	+100	+88	0	0	+89	+98	+131	+100	+100	+100	+100
Angling	44	+77	+77	0	0	+77	+77	+100	+77	+77	+77	+77
Hunting	50	+2	0	0	0	+1	+0	+4	+2	+2	+2	+2
Other Recreation	180	+21	+11	0	0	+11	+21	+27	+21	+21	+21	+21
Commercial Salmon Fishing Employment (Direct and Indirect)	55	+42	+42	0	+4	+42	+42	+50	+42	+42	+42	+42
(in $ x 1,000)												
Timber Receipts [4]												
1981 prices	48,042	-2,156	+628	+11,618	+7,222	+3,140	-3,768	-16,956	+628	-4,082	-2,198	-12,246
1982 prices	19,431	-872	+254	+4,699	+2,921	+1,270	-1,524	-6,858	+254	-1,651	-889	-4,953
Payments to Counties [5]												
1981 prices	24,021	-1,078	+314	+5,809	+3,611	+1,570	-1,884	-8,478	+314	-2,041	-1,099	-6,123
1982 prices	9,716	-436	+127	+2,350	+1,461	+635	-762	-3,429	+127	-826	-450	-2,476
Total Generated Personal Income [6]	42,998	-287	+1,900	+10,855	+6,238	+3,714	-2,044	-12,845	+1,666	-2,282	-631	-9,127

[1] This alternative constitutes a continuation of the present allowable cut.
[2] Taken from Table 1-2 (page 1-3) of the Westside Salem EIS.
[3] Equivalent Fulltime Work years. Taken from Table 3-16 through 3-19 (pages 3-47 to 3-51) of Westside Salem EIS; elements may not add due to rounding.
[4] Taken from Table 1-7 (page 1-5) of the Westside Salem EIS. Average prices were $314 per MBF in 1981 and $109 per MBF in 1982 (in $ x 1,000).
[5] O&C revenue distribution is based on a 50% of total harvest receipt formula (in $ x 1,000).
[6] Taken from Tables 3-16 through 3-19 (pages 3-47 to 3-51) of the Westside Salem EIS (in $ x 1,000).

Appendix C

Bureau of Land Management (BLM) O&C Forest Resources Policy

This statement sets forth BLM policy for management of the Revested Oregon and California (O&C) Railroad and reconveyed Coos Bay Wagon Road Grant lands situated in the State of Oregon. It reflects the provisions of the Act of August 28, 1937 (O&C Act), and the effects of other relevant legislation and Executive Orders.

The BLM manages 2.1 million acres of O&C lands in western Oregon. The revenues and employment generated by timber sales, conversion of timber to wood products, and other marketable values derived from these lands significantly affect the State and local economies. It is further recognized that public use of these lands through consumptive and non-consumptive recreation, including sport hunting and sport and commercial harvest of salmon and steelhead produced in streams on the O&C lands, also contributes to the local and State economies. The primary objectives of the management program on the O&C lands are to manage for a high-level and sustained yield output of wood products needed to contribute to the economic stability of the local communities and industries, and to provide for other land uses as established in the O&C Act and other legislation.

The following principles will guide BLM in managing the forest resources on O&C lands:

1. Resource management plans or management framework plans as developed through the land-use planning process shall constitute the primary guides for carrying out legislative mandates and Bureau policies.

2. All O&C land administered by BLM in western Oregon will be classified according to the Timber Production Capability Classification. Lands classified as suitable for timber production shall be managed for timber and wood product production, to the extent possible, under the requirements of law. Lands classified as nonsuitable for timber production shall be allocated to the fullest extent possible to meet the needs for non-timber public land uses. Where nonsuitable lands cannot adequately provide for other uses set forth in the O&C Act and other applicable legislation and Executive Orders, suitable lands may be managed to meet the needs for the following:

   a. Maintenance of water quality in accordance with Federal and State standards. Timber harvesting may be restricted or excluded only in areas where mitigating measures will not maintain water quality standards.

   b. Protection of wetlands, including riparian zones. Timber harvesting may be restricted or excluded only in areas where mitigation measures will not be effective.

   c. Conservation of specifically identified habitats for federally listed, threatened and endangered species. Timber harvesting may be restricted or excluded only in areas where mitigating measures will not be effective.

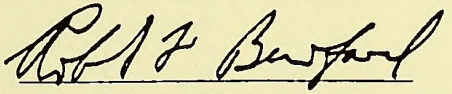
   d. Research and development pertinent to the management of the land resources. Timber harvesting may be restricted or excluded only in areas where mitigating measures will not maintain resource values, and research is assessing these values: timber harvesting may be restricted or excluded pending the research conclusions.

   e. Consideration of State goals and objectives concerning State-listed, threatened and endangered species in land-use planning and management. Restrictions may be utilized to achieve the habitat objectives developed from the BLM plans.

   f. Consideration of habitat needs of native species. Restriction of timber harvest may be considered when these habitat needs cannot be met through established timber harvest practices.

   g. Protection of developed high-value recreation areas, including the visual quality of significant scenic areas. Restriction or exclusion of timber harvest may be considered in the protection of established recreation facilities. Timber harvest may be restricted in the protection of scenic areas only where mitigating measures will not prove effective.

3. The allowable cut determination shall be based on nondeclining harvest level over time. Departures from the nondeclining harvest level may be permitted in either direction. Any increases shall not exceed the long-term sustained yield capacity of the land; decreases shall be economically and/or biologically justified and timed so as to minimize impacts on dependent industries and local economies.



Director, Bureau of Land Management

Appendix D: Analysis of 50- and 60-Year Minimum Harvest Ages

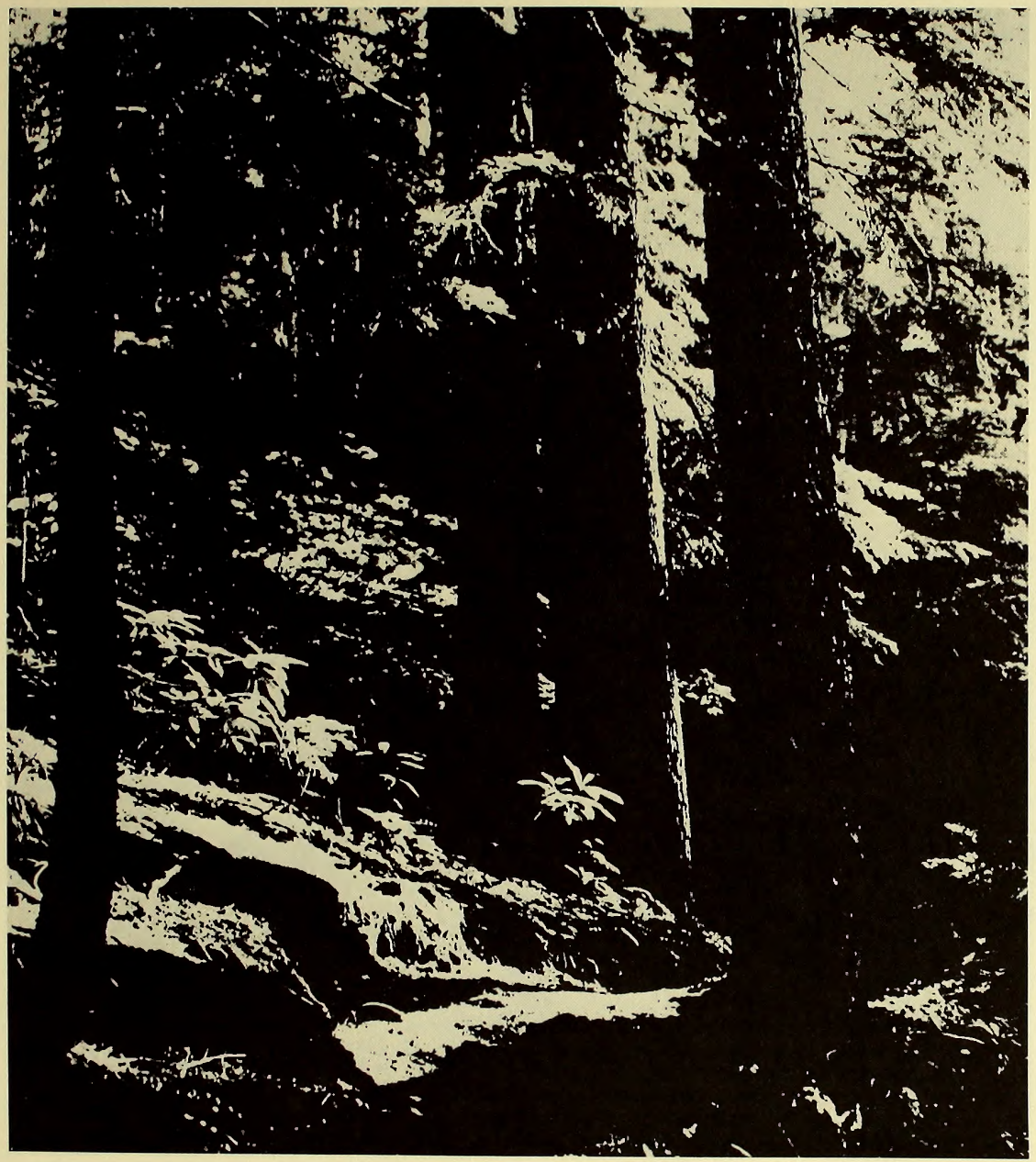
BLM uses a computer model to simulate the growth and harvest of the forest over time in projecting allowable cuts. Policy requires that the volume of usable wood available for harvest each decade be even flow and non-declining. Increases are permissable, but decreases in harvest are not normally planned. The computer model tests different harvest levels and finds the highest harvest level that can be projected over a 40-decade period to clearly demonstrate its sustainability.

One of the inputs into the allowable cut projection that has a direct effect on the harvest level is selection of future minimum harvest age (MHA). This is the youngest age at which harvest of the forests of the future will occur. Generally, a lower (younger) MHA maximizes short-term production by permitting higher harvests now and over the next several decades. Ultimately, however, this can delay reaching maximum potential long-term production by precluding development of proper age-class distribution.

One of the goals of timber management is to eventually regulate the forest so that maximum even-flow volume of timber production is attainable. When regulated, the forest would be comprised of a relatively even distribution of stands in various age classes, the oldest being the age at which mean annual increment culminates. This represents the point where maximum annual growth and maximum annual harvest scheduling are equal. For the average future stand of Westside Salem, this age is between 70 and 80 years.

Generally, when MHAs younger than this optimum age are selected, the eventual regulation is delayed or even, in effect, prevented. Throughout the planning process many allowable cut projections have been made using various MHAs for Westside Salem. Two factors have been apparent throughout these cut projections:

1. The growth of the forest has never been able to keep up with the initial even-flow allowable cut



when the allowable cut was raised to the point where future harvest was forced below age-class 50. MHA 40 has never been an option.

2. MHA 70 has consistently shown little advantage in terms of early regulation of the forest and has been quite restrictive in terms of harvest.

Based on these previous examinations, the choice of an appropriate MHA for the proposed decision was narrowed to MHA 50 and MHA 60. Allowable cut projections made on the proposed decision intensive timber base using these two MHAs resulted in the following:

Table 8 Minimum Harvest Age Comparison

	MHA =50	MHA = 60
Intensive Timber Base -	156.3 MMBF	151.0 MMBF

Additional harvest of 4.2 MMBF from VRM II and Hardwood Base Lands would then be added to either option to equal:

Total Westside -	160.5 MMBF	155.2 MMBF

MHA 60 provides for regulation of the forest in about 15 decades at which time the harvest level could be increased to the sustained yield capacity of approximately 181 MM bd. ft. annually. MHA 50 locks the forest into harvest at the younger age throughout the entire 40-decade projection period with no apparent possibilities for harvest increases.

MHA 60 is the logical choice for the future regulation of the forests of Westside Salem. MHA 60 provides a reasonable approach to eventual regulation and, at the same time, establishes annual harvest at the highest practicable level for the first decade.

Appendix E: Table 9 Areas of Critical Environmental Concern

Site Name	Management Area Size (acres)[1]	Description	Primary Resource Values	Remarks
1. Little Sink	80	Douglas-fir on broken topography, slumps, ponds, natural disturbance	Botanic	Designated Research Natural Area
2. Saddleback Mountain	135	Last old-growth Pacific Silver fir/western hemlock stand on BLM-administered land in the Oregon Coast Range	Botanic	Proposed Research Natural Area
3. Grass Mountain	728	Grass bald complex, young growth Noble fir and Douglas-fir	Botanic	Proposed Research Natural Area
4. High Peak - Moon Creek	1,526	Old-growth Douglas-fir and western hemlock	Botanic	Proposed Research Natural Area
5. The Butte	40	Ecotone between the Willamette Valley and Coast Range	Botanic	Proposed Research Natural Area
6. Valley of the Giants	47	Large, old-growth Douglas-fir and western hemlock	Botanic, Wildlife	Existing Outstanding Natural Area
7. Yaquina Head	18	Rocky coastal headland with unique plant community	Scenic, Botanic	Existing ONA
8. Little Grass Mountain	42	Grass bald complex, Douglas-fir/western hemlock	Scenic, Botanic, Wildlife	Proposed ONA
9. Marys Peak	105	Douglas-fir/western hemlock, grass balds	Scenic, Botanic	Proposed ONA
10. Big Canyon	280	Old-growth Douglas-fir and western hemlock	Scenic, Botanic	Proposed ONA
11. Nestucca River	5,280	High quality sightseeing and fishing opportunities	Scenic, Wildlife	
12. Elk Creek	1,656	Active bald eagle nest sites	Wildlife	
13. Rickreall Ridge	175	Relict vegetation	Botanic	
14. Lost Prairie	60	Wet bog/meadow with cedar, hemlock and western white pine	Botanic, Wildlife	
15. Sheridan Peak	305	Sensitive plant species	Botanic	

[1] The boundaries of areas 2, 3, 6, 12 and 13 were modified during preparation of the proposed decision. Within the total acres designated for ACEC management, 3,000 acres will be withdrawn for management and/or protection of unique natural values. Remaining acres are in riparian zones, TPCC withdrawn areas and caution zones (i.e., harvest with caution).

Appendix F: Environmental Preferability

National Environmental Policy Act (NEPA) goals are described in the text.

The summary ratings shown in the following table reveal some inconsistencies or conflicts between the goals themselves resulting in similar ratings for alternatives with significantly different emphasis. Goals one through four are perhaps best met by minimizing disturbance of the existing environment. This is reflected by the high compliance rating of two alternatives (5 and 9) that produce the smallest timber harvest. On the other hand, goals five and six deal with balance and socio-economic values which help produce an almost equally high rating for the EIS proposed action. Not unexpectedly, those alternatives that emphasize commodity production at the expense of other resource values (1 and 2) received the lowest environmental preferability rating.

Table 10 Compliance with NEPA Goals

	Alternatives										
		1	2	3	4	5	6	7	8	9	10	
NEPA Goal	EIS Prop. Act.	Max. Tbr.	Str. Tbr.	Emp. Tbr.	Emp. Other	Full Eco.	Lo MHS	Hi MHS	No Herb.	No ACE	No Action	Proposed Decision
One	6.1	1.7	3.1	5.0	7.0	8.1	5.7	6.6	6.3	7.7	3.6	5.3
Two	7.1	2.3	4.3	5.0	6.1	5.4	6.3	6.7	6.3	6.4	4.4	6.7
Three	6.9	1.4	3.1	5.0	6.4	7.1	5.6	6.7	6.0	7.3	4.3	5.8
Four	6.3	1.1	2.6	4.3	6.6	8.9	5.6	6.4	5.9	7.6	3.4	5.5
Five	7.1	5.0	5.7	6.0	5.1	4.7	6.4	6.3	5.3	5.1	5.7	6.3
Six	7.6	2.0	3.7	5.2	5.8	7.3	6.1	6.8	5.8	7.1	5.4	6.8
Average Rating	6.85	2.25	3.75	5.08	6.17	6.92	5.95	6.58	5.93	6.87	4.46	6.07
Overall Rank	3	12	11	9	5	1	7	4	8	2	10	6

Appendix G: Summary of Public Input

The development and utilization of public input has been a key element of the planning process. It was initiated in the data collection phase (Unit Resource Analysis) through the preparation of a mailing list of interested and informed individuals and organizations. This list was updated and enlarged as additional contacts were made. Parties on the list were kept informed of planning progress through periodic newsletters, and their comments were solicited at various stages.

Additional comments were received at public meetings and as a result of solicitations in the press.

The following table indicates the points in the planning process at which comments were received and categorizes respondents on the basis of affiliation or primary interest. This categorization will be used to facilitate analysis of the responses. While these categories may seem simplistic, most responses fit pretty clearly into these groupings.

Table II Summary of Responses

	Alternatives Analysis	Draft EIS	Final EIS	Total
Government	18	13	6	37
Timber	48	18	6	72
Environmental	16	12	3	31
ORV	18	—	—	18
Other	4	1	—	5

Government

Comments were received from eight State agencies and offices, seven Federal agencies, five counties, the Association of O&C Counties, one municipality, two county soil and water conservation districts and the Mid-Willamette Valley Council of Governments.

A large share of the responses of State and Federal agencies related to the technical adequacy of the planning and EIS documents. Efforts were made to correct these deficiencies as planning progressed.

In addition, the U.S. Forest Service and the Oregon Department of Forestry stressed the need for consistency with their programs and goals. The latter agency was quite concerned that the proposed action did not appear to meet the objectives of the Forestry Program for Oregon (FPFO).

The U.S. Fish and Wildlife Service and the Oregon Department of Fish and Wildlife generally supported the selection of an alternative that would optimize benefits to fish and wildlife. The State agency was particularly concerned with maintaining a certain level of logging residues, spotted owl habitat and snags and enhancing riparian habitat and general habitat diversity. Maintenance of older forest habitat was identified as an important need.

County governments and the Mid-Willamette Valley Council of Governments were primarily concerned that BLM plans be consistent with local plans, programs and objectives. Several counties reflected on the need to restrict ORV use, and Yamhill County was concerned about economic stability.

The Association of O&C Counties has provided detailed analysis and comprehensive input at each planning stage. The range of their concerns is difficult to summarize, but emphasis is on critical analysis of actions that might reduce revenue distributions to the O&C counties. They suggest that amenity values can be largely accommodated under multiple-use and that some proposed withdrawals from base timberlands may not be justified. They also contended that the proposed action was inconsistent with the dominant-use principle embodied in the O&C Act and that data from the two SYUs should be combined before calculating the allowable cut.

State and county soil and water conservation responses all stressed maximizing timber production while employing good management practices to protect other resource values.

Timber

This category includes responses from logging, lumbering and timber companies and their associations, woodland owners, individuals with similar concerns, and timber industry labor unions.

Comments vary from requests for maximum timber production to provide relief for a depressed industry and dependent communities to in-depth analysis of the entire planning process. Responses from the North West Timber Association, Douglas Timber Operators, Inc., Industrial Forestry Association and Western Forest Industries Association are particularly notable for the detail of their presentations. Some of the significant statements made by this group are:

- Withdrawal of lands from the commercial forest land base for old-growth habitat, spotted owls, riparian habitat and protection of visual resources is inconsistent with the provisions of the O&C Act.
- A high level of protection of amenity values can be achieved without removing lands from the commercial forest land base.
- The proposed action does not provide adequate concern for community stability, Forestry Program for Oregon (FPFO) goals and 1981 Oregon House Memorial No. 1.
- Wildlife management planning should consider intermingled land ownership.
- Maximum effort should be made to convert hardwood stands to conifers. Enough hardwoods will be left to provide for non-timber values.

- The Oregon Forest Practices Act adequately protects streams.

- Old-growth habitat needs identified for deer and elk in the Oregon Coast Range are not supportable.

- Based on BLM's own inventory, spotted owls do not need a 1,000 or even 300 acres of old-growth for each pair.

- Timber supply and resultant jobs for people are more important than habitat for animals.

Environmental

Included in this category are responses from organized groups commonly identified as active in support of environmental protection and wildlife management issues and from individuals expressing generally the same point of view.

These groups and individuals tend to support the ecosystem management concept and perceive a need to retain and possibly develop old-growth stands as a key element of this concept. Some feel there is little or no incentive for protection of old growth timber on private lands and therefore such protection on BLM land is even more important. Selection of an alternative not embodying the principles of ecosystem management "would result in relict, non-viable populations of native wildlife disjunct by large distances."

Support is given to visual management, State-listed sensitive species, research natural areas, areas of critical environmental concern, Corvallis-to-the-Sea Trail and wild and scenic rivers. In general it was felt that non-timber values should be given equal consideration with timber. Special consideration should be given, it was said, to protection of snags and woody debris for wildlife.

Opposition was expressed to the use of herbicides. It was suggested that management techniques are available and should be employed to avoid the use of herbicides.

It was stated that where information is incomplete as to the habitat needs of indigenous species, it makes sense to err on the side of caution.

One respondent said that the needs of wildlife are as important as the needs of people.

ORV

This category was identified because of the large response of off-road vehicle enthusiasts. For the most part, this group responded only to indicate a preference for maintaining as much land as possible open to ORV use. Closures, it was pointed out, would concentrate use resulting in more soil damage and would adversely impact safety and enjoyment of the sport.

Other

Other responses, consisted of comments in support of opportunities for camping, hiking and rockhounding and for protection of botanical values on Rickreall Ridge.

Appendix H: Consistency with Federal, State and Local Planning

The Federal Land Policy and Management Act (FLPMA) provides that BLM shall: 1) coordinate plans with local, state, and other Federal planning efforts; and 2) provide consistency with other agency plans to the extent practical under Federal law, regulations and policy. This section, therefore, addresses the relationship of the proposed decision with such plans.

Coordination with other agencies was carried out thoughout the planning process. Data were exchanged, documents were reviewed and meetings were held to clarify goals and guidelines. Generally, State and local plans provide a broad framework for identification and accommodation of a variety of land uses to meet appropriate public needs. The Westside Salem plan provides a similar framework for BLM-administered land.

Consistency of the proposed decision with specific agency plans and goals is as follows:

Hebo, Marys Peak and Alsea Unit Plans - Siuslaw National Forest

From the standpoint of comprehensive planning, two identified areas of mutual interest are the Marys Peak Scenic-Botanic Area and the Corvallis-to-the-Sea Trail. Planning and management of these areas will continue to be closely coordinated.

Forestry Program for Oregon (FPFO) - Oregon State Board of Forestry

Basic Objective: Maintain the maximum potential commercial forest land base consistent with other resource uses while assuring environmental quality.

Consistency: The proposed decision retains the maximum potential for commercial forest lands. No commercial forest land has been designated for an irreversible change of use, such as commercial or industrial development. BLM

considers the mix of uses defined in the proposed decision to be consistent with the "other resource uses" and "environmental quality" portions of the goal. Congressional Acts, Executive Orders and "Oregon Best Management Practices under the Clean Water Act" provide guidelines for management of certain lands. Throughout the planning process, these guidelines have served to help define the land-use mix.

Basic Objective: Identify and implement the levels of intensive forest management required to achieve maximum growth and harvest.

Consistency: Intensive management practices will be implemented on all 183,800 acres contained in the timber production base to the extent that practices are cost effective and environmentally sound. These acres comprise 80 percent of the commercial forest land base.

Basic Objective: Rehabilitate commercial forest land that presently is not stocked with a commercial species.

Consistency: Conversion of hardwood stands and brushfields is planned.

Basic Objective: Maintain community stability by remaining flexible for increases in future harvest levels that would offset projected shortages.

Consistency: The Office of the State Forester, in a letter dated September 14, 1982, identified a non-declining even-flow harvest level of 28.7 million cubic feet per year (MMCF/year) or 186 MM bd. ft. (16' log scale). The proposed decision provides for an annual harvest of approximately 24 MMCF/year or 155 MM bd. ft. An inconsistency exists with regard to the objective to maintain flexibility. BLM policy does not provide for deviation from even-flow under normal circumstances.

Oregon Wildlife Goals

Oregon Revised Statute 496.012 establishes goals for the management of the State's wildlife. Following is a consistency determination for goals that relate to the proposed decision:

Goal - To maintain all species of wildlife at optimum levels and prevent the serious depletion of any indigenous species.

Consistency - The proposed decision provides for diversity of habitat sufficient to maintain at least viable populations of most species. Cavity dwelling birds may be an exception. Spotted owl habitat will be maintained to meet Task Force guidelines.

Goal - To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife.

Consistency - The proposed decision provides for protection of aquatic and terrestrial habitat, improvement of aquatic habitat and cooperative wildlife management. All should serve to enhance the production and public enjoyment of wildlife.

Goal - To develop and maintain public access to the lands and waters of the State and the wildlife resources thereon.

Consistency - BLM has built and maintained a network of roads that provide public access to a major portion of its lands. This program is expected to continue under the new plan.

Statewide Planning Goals - Oregon Land Conservation and Development Commission (LCDC)

Only those LCDC goals which have a direct relationship with the proposed decision were examined. LCDC goals not generally applicable are: 3. Agricultural lands; 10. Housing; 11. Public facilities and services; 12. Transportation; 14. Urbanization; 15. Willamette River Greenway; 17. Coastal Shorelands; 18. Beaches and dunes.

Goal 1: Insure citizen involvement in all phases of the planning process.

Consistency: The BLM planning process provides for public input at every stage, from the initial inventory to critique of the final decision.

Goal 2: Establish a land use process and policy framework as a basis for all decisions and actions.

Consistency: The O&C Act and FLPMA provide a policy framework for all decisions and actions. The proposed decision has been developed in accord with these Acts.

Goal 4: Conserve forest lands for forest uses.

Consistency: The proposed decision provides for retention of forest lands for forest uses. The productive capacity of the land is not exceeded, and all other uses are compatible with forest uses in this goal.

Goal 5: Conserve open space and protect natural and scenic resources.

Consistency: The proposed decision conserves open space, as no developments (housing, urbanization, etc.) are included. Protection is provided for fish, wildlife, scenic resources and watershed values.

Goal 6: Maintain and improve the quality of the air, water and land resources.

Consistency: The proposed decision provides for enhancing land resources and attaining Federal and State water quality standards. Slash burning under the proposed decision will increase the level of air pollutants. However, all burning will be done in accordance with the Oregon State Smoke Management Plan.

Goal 7: Protect life and property from natural disasters and hazards.

Consistency: BLM projects are designed to minimize hazards from fire, flooding, landslides and debris slides.

Goal 8: Satisfy the recreational needs of the citizens of the State, and visitors.

Consistency: The proposed decision provides for retaining existing recreation sites and slight expansion. It also provides special management of highly sensitive visual areas, protects unique natural areas and enhances fish habitat to help meet expected recreational demands.

Goal 9: Diversify and improve the economy of the State.

Consistency: The proposed decision maintains a high level of timber production. It will contribute to recreation and commercial fishing industries by maintaining and improving habitat for anadromous fish. In addition, modest support for tourism will result from maintaining scenic and recreational attractions.

Goal 13: Conserve energy.

Consistency: The conservation and efficient use of energy sources are objectives in BLM activities. The use of logging residue for firewood will be encouraged.

Goal 16: Recognize and protect estuarine resources.

Consistency: The proposed decision recognizes and protects estuarine resources by maintaining water quality and striving to reduce sediment resulting from operations.

Goal 19: Conserve the long-term values, benefits and natural resources of the near shore ocean and continental shelf.

Consistency: The proposed decision affords protection and enhancement for anadromous fisheries.

Oregon Coastal Zone Management Program

The foundation for this program is the 1973 Oregon Land-Use Act, ORS 197, requiring the State to develop statewide planning goals. The goals cited in the foregoing section form the basis for this program, and thus, consistency with these goals represents consistency with the Oregon Coastal Zone Management Program. A more comprehensive consistency determination has been provided to LCDC.

County Comprehensive Plans - Benton, Columbia, Lincoln, Polk, Tillamook, Washington and Yamhill Counties

Goals and objectives in county plans are based primarily on LCDC goals and objectives and, therefore, are very similar. For this reason, the following basic objectives are considered to apply collectively to the seven counties.

Basic Objective: Maintain commercial forest lands for producing wood fiber and other forest uses.

Consistency: The coniferous forest land base will be maintained as described in the FPFO consistency section, although acreages will vary from county to county. The degree of other uses is not defined and could vary considerably among counties.

Basic Objective: Obtain optimum productivity from commercial forest lands through forest management techniques.

Consistency: Intensive forest management will be practiced on approximately 80 percent of the commercial forest land base.

Basic Objective: Protect water quality, fish and wildlife habitat, scenic and recreational values.

Consistency: The proposed decision provides for protecting identified values.

Basic Objective: Provide for economic diversification.

Consistency: The proposed decision will provide some indirect encouragement for economic diversification. Commercial and recreational fisheries will benefit from protecting and enhancing anadromous fish habitat. The tourist industry may benefit as a result of the protection of visual and recreational resources.

Basic Objective: Expansion of existing industries.

Consistency: While the proposed decision will result in a modest increase in timber offering, industry expansion is expected to be limited due to excess installed capacity. Some increase will be provided in opportunities related to commercial and sport fishing.

Town and City Comprehensive Plans

The primary interest of municipalities in BLM-administered land is protection of watersheds. Basic protection will be provided by limiting disturbances of riparian zones, wetlands and fragile sites. Beyond this basic protection level, BLM has developed cooperative agreements to recognize special concerns within certain municipal watersheds. Additional agreements will be developed as needed.

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